UNION BRASS

MANUFACTURING COMPANY,

CHICAGO.

THE
ATHENÆUM
OF
PHILADELPHIA.

JOHN LIVEZEY FUND

Ref. TD CAT Union Brass, 1884

Purchased 6/74
Charles E. Gardiner
$75.00

For Reference

Not to be taken from this room

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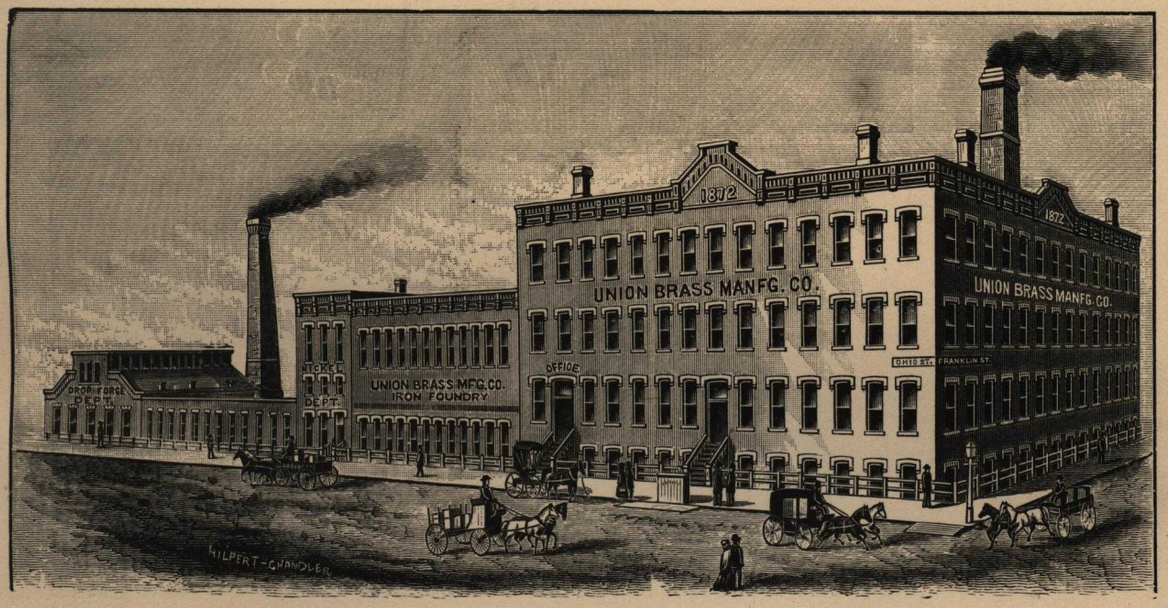
JUL 1974
THE ATHENAEUM

Illustrated Catalogue and Price List

OF THE

UNION BRASS MANUFACTURING CO.

1884



Nos. 85 to 109 Ohio Street,

CHICAGO, ILLINOIS.

Brass AND Iron Founders AND Machinists,

MANUFACTURERS OF EVERY VARIETY OF

RAILWAY COACH TRIMMINGS AND FINE HOUSE HARDWARE.

Eastern Office, No. 115 Broadway, New York.

J. HALL DOW, PRESIDENT. L. I. TODD, VICE-PRESIDENT.

C. A. HITCHCOCK, SUPERINTENDENT. WM. DOW, SECRETARY.

CHICAGO:
THE J. M. W. JONES STATIONERY AND PRINTING COMPANY.
1884.

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5461: Charles E. Gardiner 6/74 $75.00

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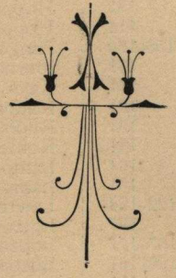
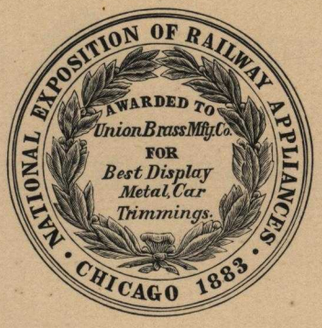
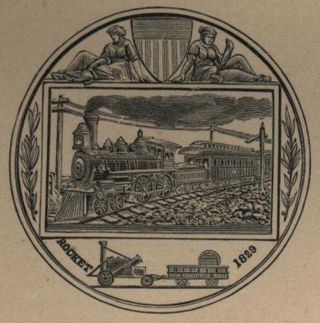




In presenting our revised and enlarged Catalogue we desire to call your attention to the fact that we are now in a position to equip Railway Coaches with the entire Internal Fittings, including Ceilings, Seats or Chairs, Trimmings, Heaters, Glass, Curtains and Carpets, all from the latest designs and patterns, and, where required, to make special designs.

In a work of this kind it is impossible to illustrate ALL of our patterns, but we have endeavored, by inserting leading designs, to show a fair representation of our work; and to prevent, as far as possible, errors in ordering, we have, in addition to the terms usually applied to our goods, adopted, where practicable, the technical terms used in the Master Car Builders' Vocabulary.

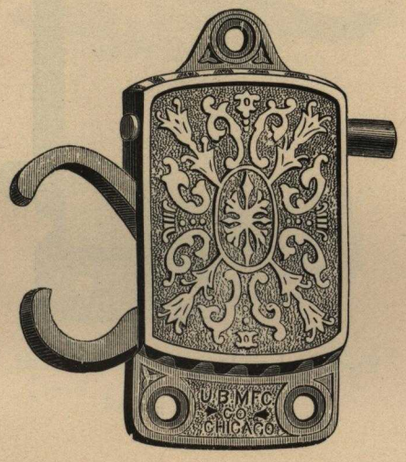


Union Brass Manufacturing Company.

SASH LOCKS.

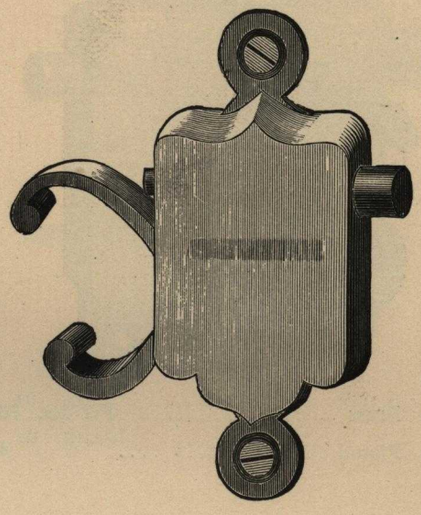
(Window Latches.)

(Full Size.)



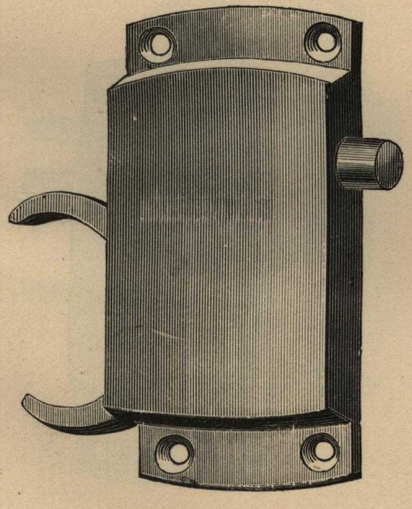
No. 1 Bronze ..... Per doz. $4 00

1 Plated ..... " 4 00



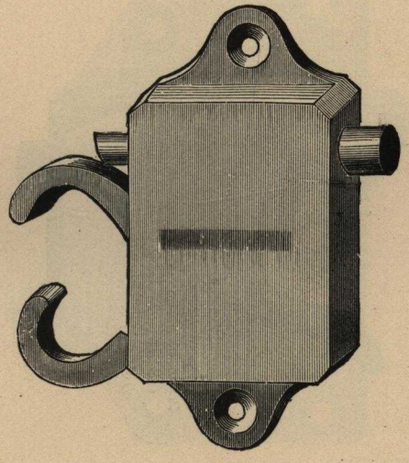
No. 2 Brass ..... Per doz. $3 00

2 Plated ..... " 3 50



No. 3 Extra Heavy, Brass ..... Per doz. $4 50

3 " " Plated ..... " 5 50



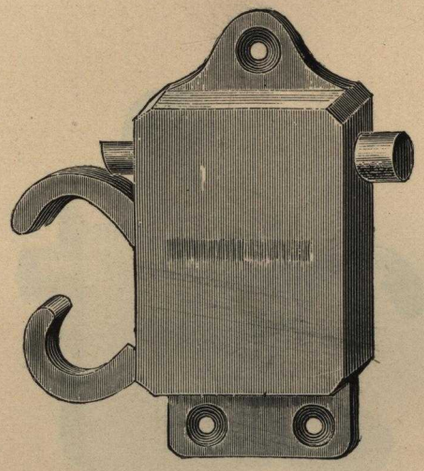
No. 4 Brass ..... Per doz. $3 25

4 Plated ..... " 3 75

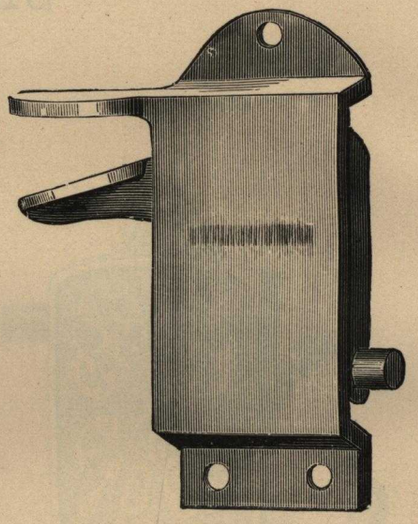
SASH LOCKS.

(WINDOW LATCHES.)

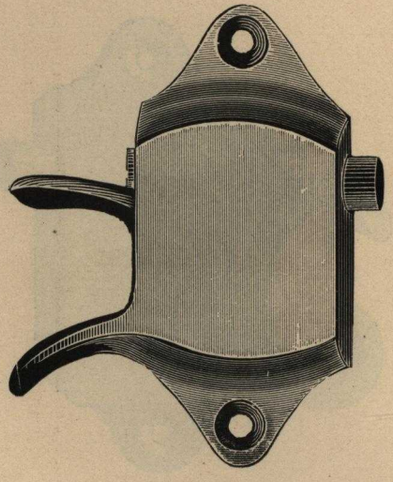
(Full Size.)



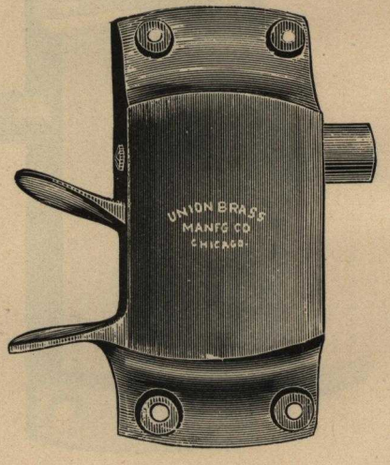
No 5 Brass ....Per doz. $3 50
5 Plated .... " 4 00



No. 6 Right or Left Hand, Brass. Per doz. $4 00
6 " " " Plated " 4 80



No. 7 Brass .....Per doz. $3 25
7 Plated ..... " 3 75

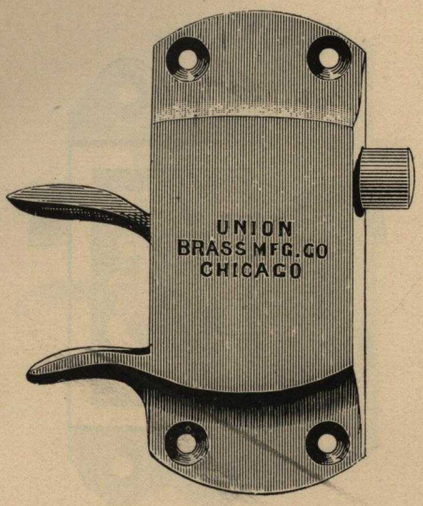


No. 8 Brass .....Per doz. $3 00
8 Plated ..... " 3 60

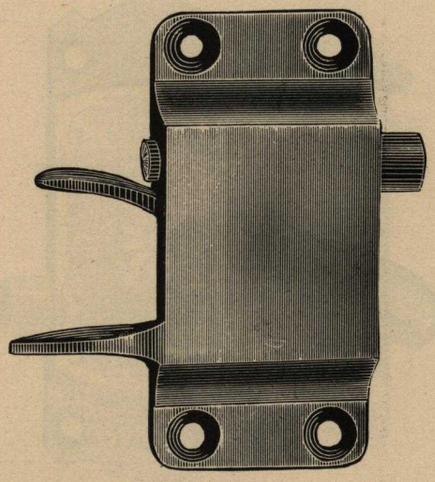
SASH LOCKS.

(WINDOW LATCHES.)

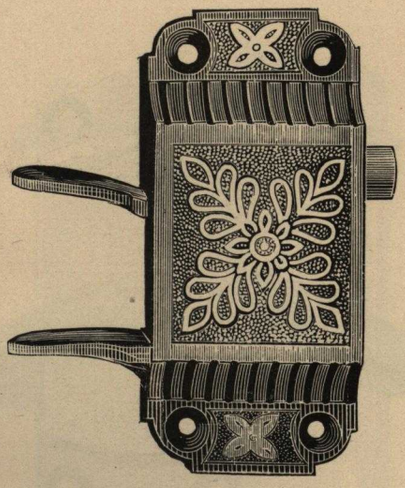
(Full Size)



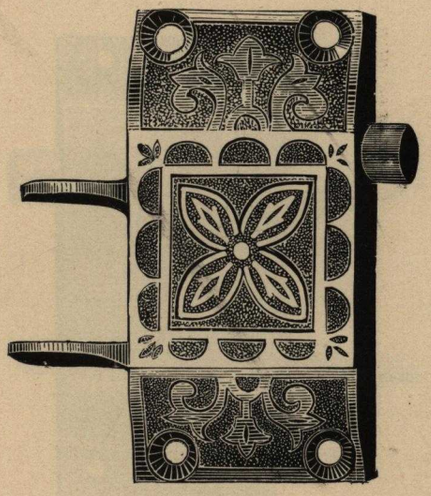
No. 9 Brass ..... Per doz. $3 50
9 Plated ..... " 4 25



No. 10 Brass ..... Per doz. $3 75
10 Plated ..... " 4 50



No. 11 Bronze ..... Per doz. $4 50
11 Plated ..... " 4 50
13 Similar to No. 11, Bronze .. " 4 50
13 Similar to No. 11, Plated .. " 4 50

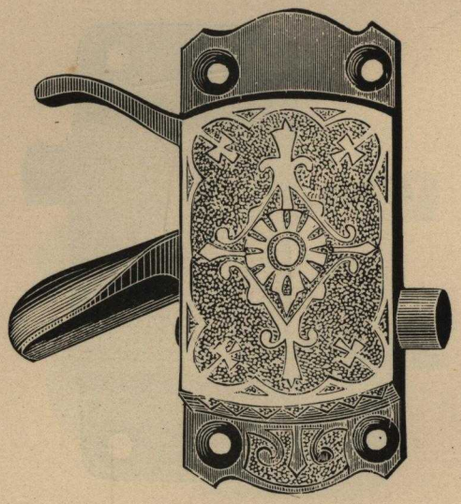


No. 12 Bronze ..... Per doz. $4 75
12 Plated ..... " 4 75

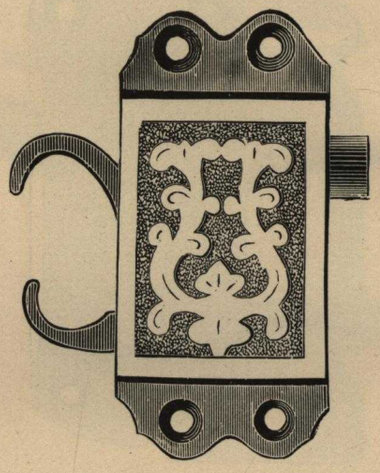
SASH LOCKS.

(WINDOW LATCHES.)

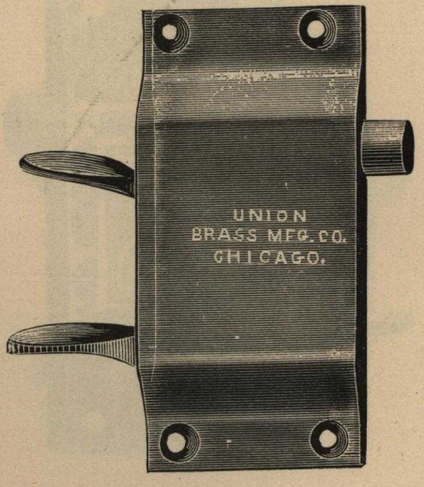
(Full Size.)



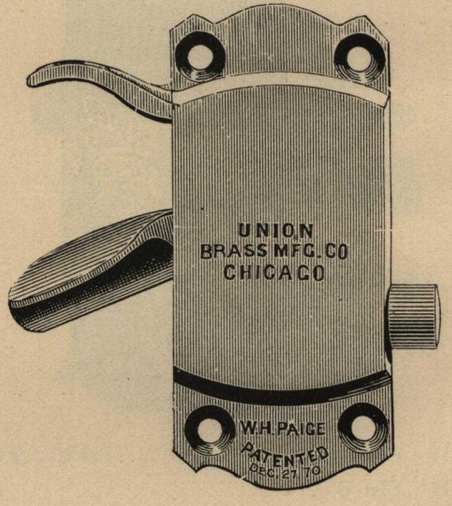
No. 14 Bronze ..... Per doz. $5 40
14 Plated ..... " 5 40



No. 15 Bronze ..... Per doz. $4 00
15 Plated ..... " 4 00



No. 16 Brass ..... Per doz. $4 00
16 Plated. ..... " 4 75

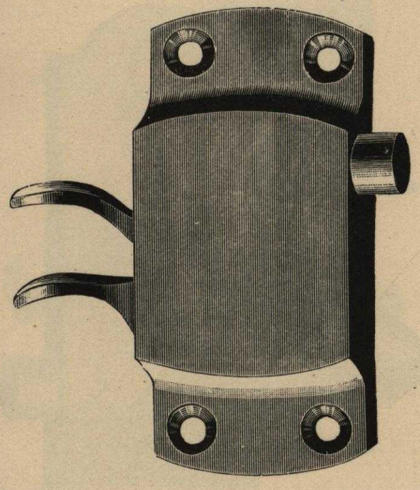


No. 17 Brass ..... Per doz. $4 60
17 Plated ..... " 5 40

SASH LOCKS.

(WINDOW LATCHES.)

(Full Size.)



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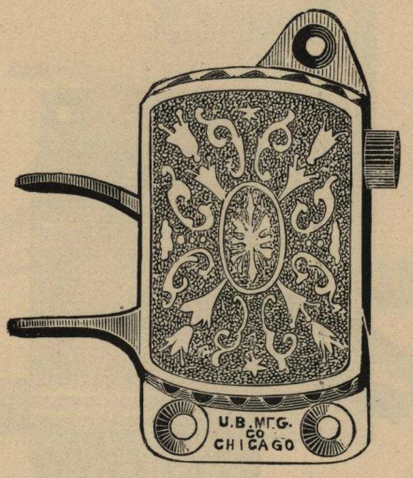
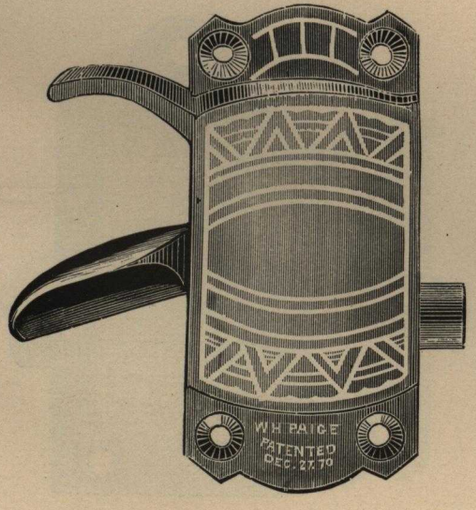
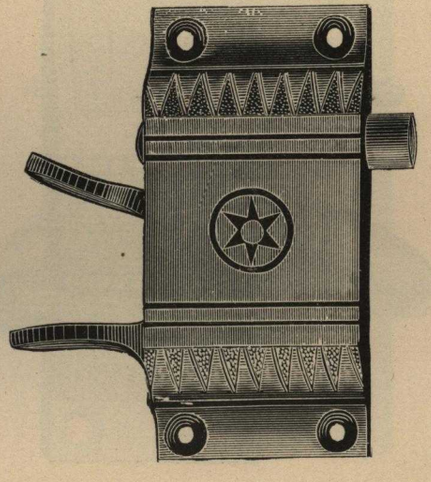
18 Plated ..... " 5 00



No. 19 Bronze .....Per doz. $4 00
19 Plated ..... " 4 00



No. 20 Bronze .....Per doz. $5 40
20 Plated ..... " 5 40

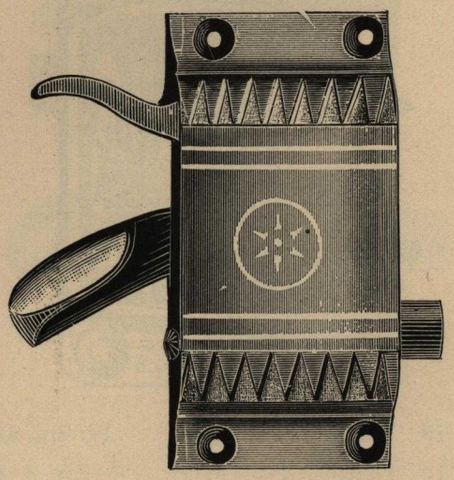


No. 21 Bronze .....Per doz. $4 75
21 Plated ..... " 4 75

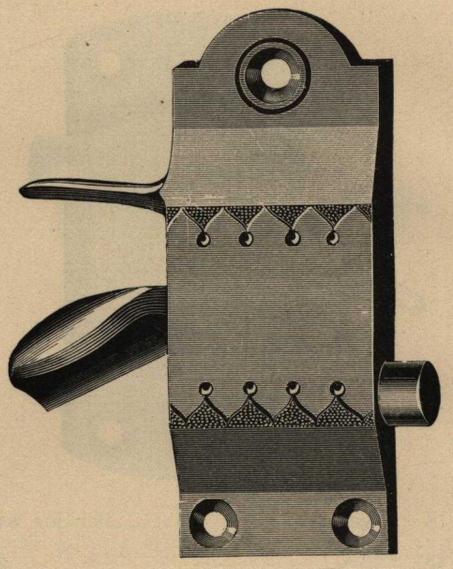
SASH LOCKS.

(WINDOW LATCHES.)

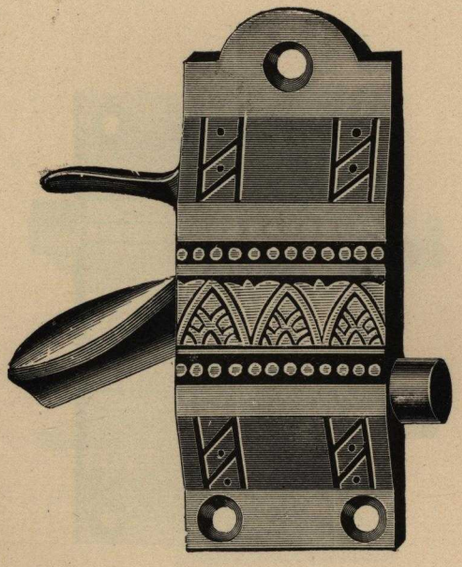
(Full Size.)



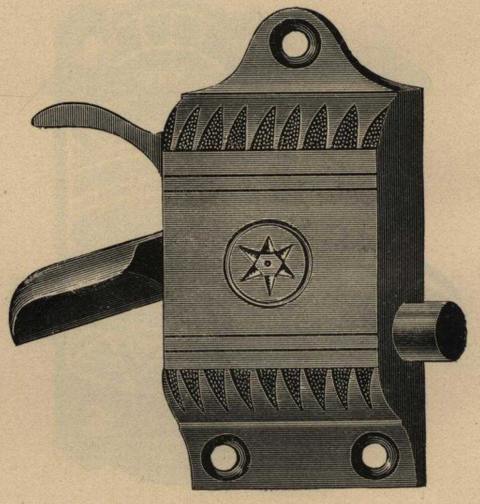
No. 22 Bronze ..... Per doz. $5 40
22 Plated ..... " 5 40



No. 23 Bronze ..... Per doz. $5 40
23 Plated ..... " 5 40



No. 24 Bronze ..... Per doz. $5 40
24 Plated ..... " 5 40

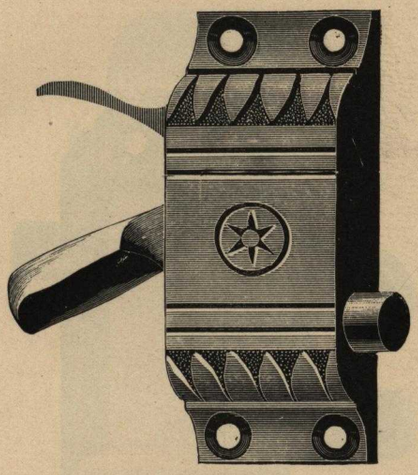


No. 25 Bronze ..... Per doz. $5 40
25 Plated ..... " 5 40

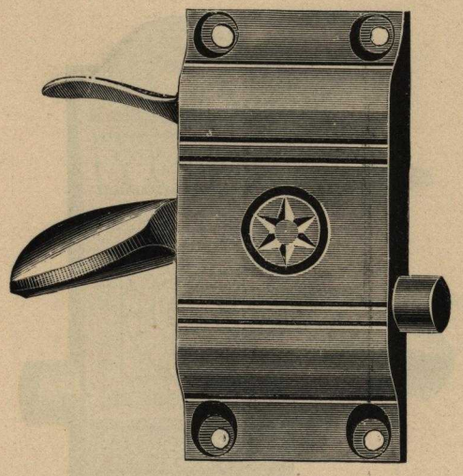
SASH LOCKS.

(WINDOW LATCHES.)

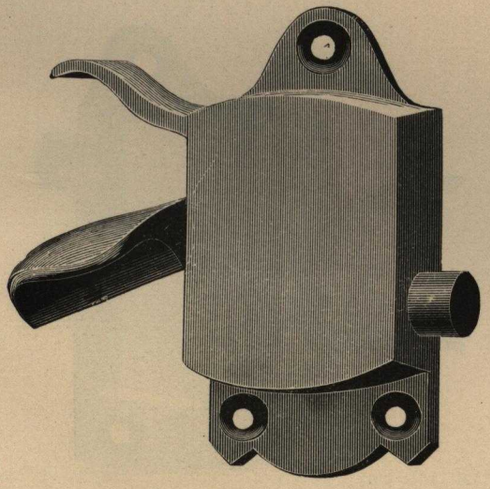
(Full Size.)



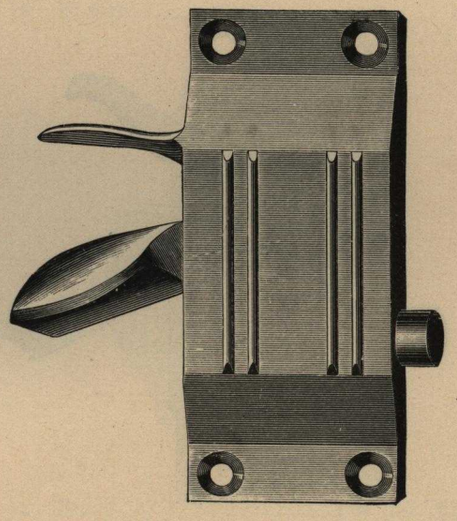
No. 26 Bronze ..... Per doz. $5 40
26 Plated ..... " 5 40



No. 27 Bronze ..... Per doz. $5 40
27 Plated ..... " 5 40



No. 28 Brass ..... Per doz. $4 60
28 Plated ..... " 5 40

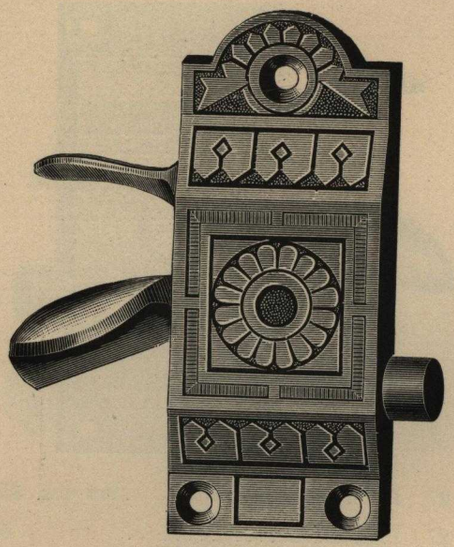


No. 29 Bronze ..... Per doz. $5 40
29 Plated ..... " 5 40

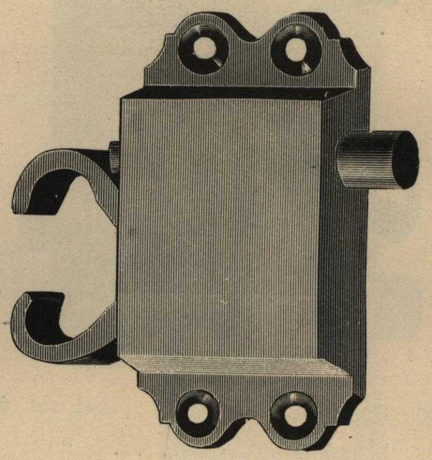
SASH LOCKS.

(WINDOW LATCHES.)

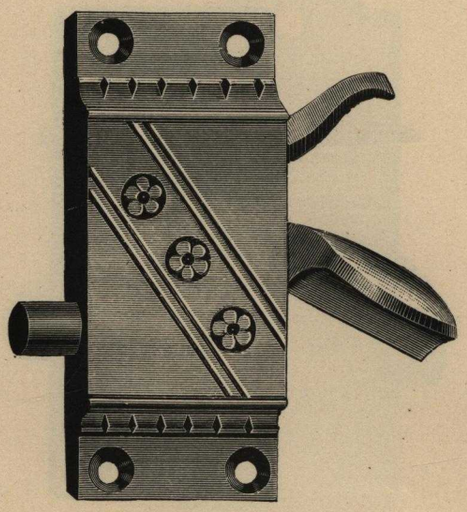
(Full Size.)



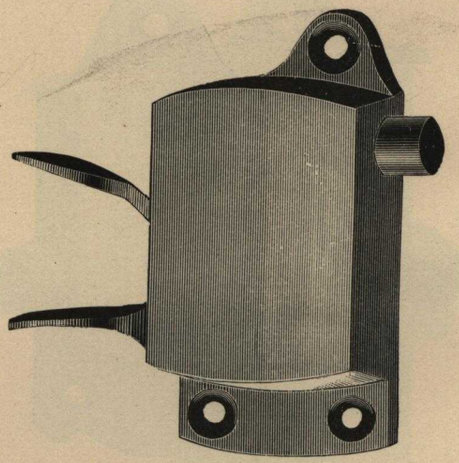
No. 30 Bronze ....Per doz. $5 40
30 Plated ..... " 5 40



No. 31 Brass .....Per doz. $3 00
31 Plated .... " 3 60



No. 32 Bronze .....Per doz. $5 40
32 Plated ..... " 5 40

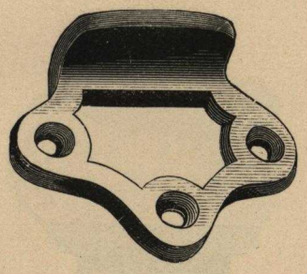


No. 33 Brass..... .....Per doz. $3 50
33 Plated ..... " 4 00

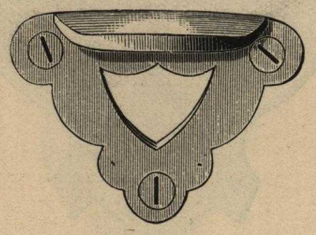
SASH LIFTS.

(WINDOW LIFTS.)

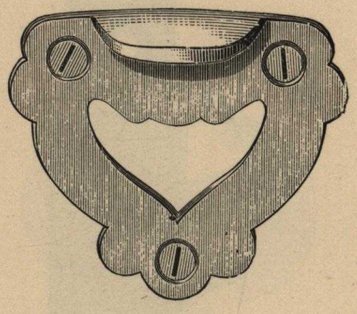
(Full Size.)



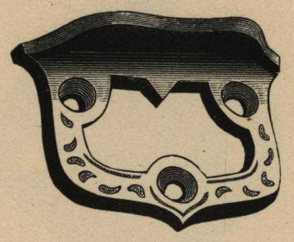
No. 7 Brass .....Per doz. $1 00
7 Plated ..... " 1 25



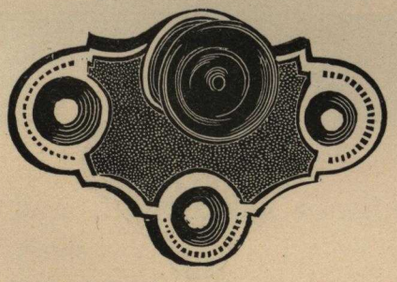
No. 8 Brass .....Per doz. $0 90
8 Plated ..... " 1 15



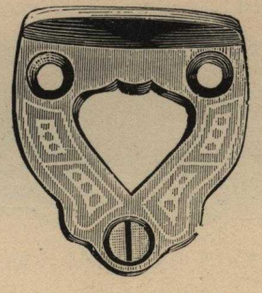
No. 9 Brass .....Per doz. $1 00
9 Plated ..... " 1 25



No. 10 Brass .....Per doz. $1 00
10 Plated ..... " 1 25
10 Bronze..... " 1 25



No. 11 Brass .....Per doz. $1 75
11 Plated ..... " 2 25
11 Bronze..... " 2 25

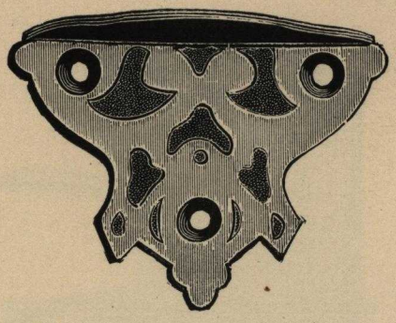


No. 12 Brass .....Per doz. $1 00
12 Plated ..... " 1 25
12 Bronze ..... " 1 25

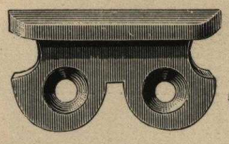
SASH LIFTS.

(WINDOW LIFTS.)

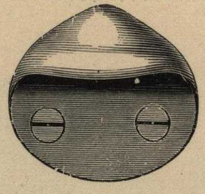
(Full Size.)



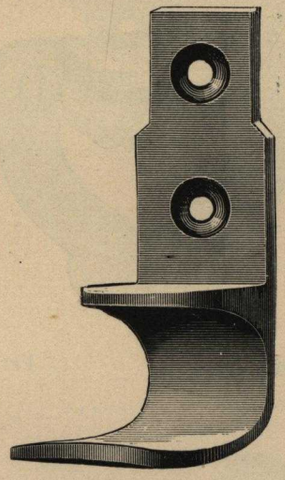
No. 13 Brass .....Per doz. $1 75
13 Plated ..... " 2 25
13 Bronze ..... " 2 25



No. 14 Brass .....Per doz. $1 00
14 Plated ..... " 1 25

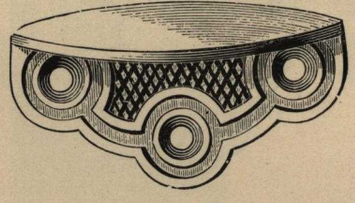


No. 15 Brass .....Per doz. $1 25
15 Plated ..... " 1 50

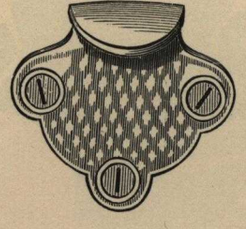


WINDOW BLIND LIFTS.

No. 16 Brass .....Per doz. $1 25
16 Plated ..... " 1 50



No. 17 Brass .....Per doz. $1 25
17 Plated ..... " 1 50
17 Bronze ..... " 1 50

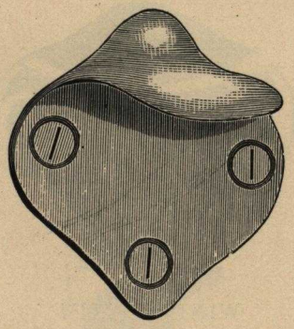


No. 18 Brass .....Per doz. $1 00
18 Plated ..... " 1 25
18 Bronze ..... " 1 25

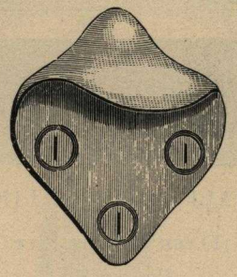
SASH LIFTS.

(WINDOW LIFTS.)

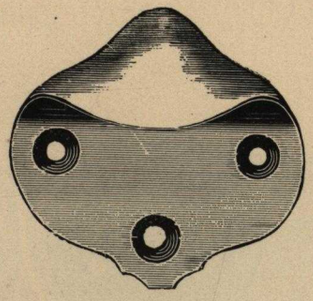
(Full Size.)



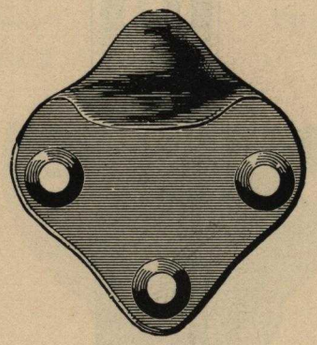
No. 19 Brass .....Per doz. $1 75
19 Plated ..... " 2 25



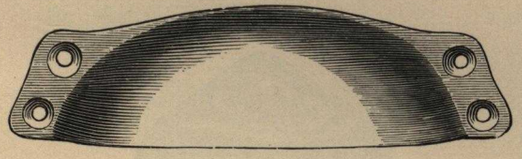
No. 20 Brass .....Per doz. $1 25
20 Plated ..... " 1 50



No. 21 Brass .....Per doz. $1 75
21 Plated ..... " 2 25

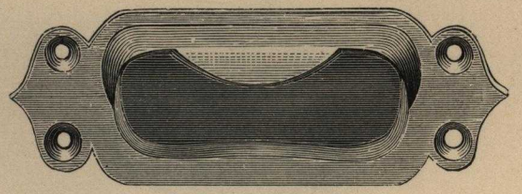


No. 22 Brass .....Per doz. $1 75
22 Plated ..... " 2 25



WINDOW LIFT.

No. 23 Brass .....Per doz. $2 25
23 Plated ..... " 3 00
No. 24 Same pattern as No. 23, but two-fifths larger.
24 Brass .....Per doz. $3 00
24 Plated ..... " 4 00



HALF MORTISE LIFT.

(FLUSH WINDOW LIFT,)

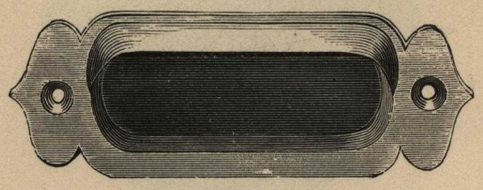
Two-thirds Size.

No. 25 Brass .....Per doz. $5 00
25 Plated ..... " 6 00

SASH LIFTS.

(WINDOW LIFTS.)

(Full Size.)

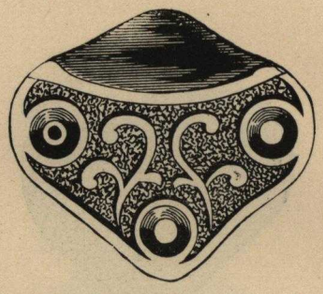


HALF MORTISE LIFT.

(FLUSH WINDOW LIFT.)

Two-thirds Size.

No. 26	Brass	Per doz.	$5 00
26	Plated	"	6 00

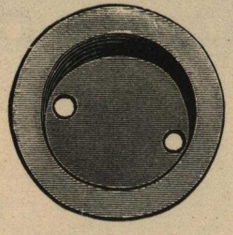


WINDOW LIFT.

No. 27	Bronze	Per doz.	$2 25
27	Plated	"	2 25

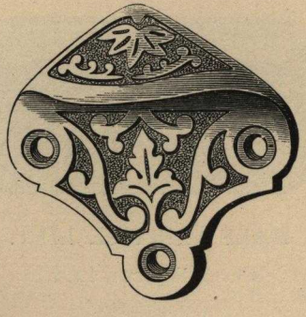
WINDOW BLIND LIFT.

No. 28	Bronze	Per doz.	$1 50
28	Plated	"	1 50



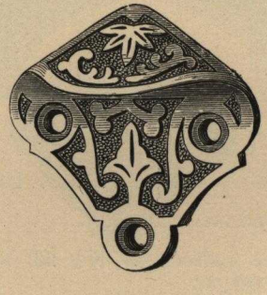
FLUSH LIFT.

No. 29	Brass	Per doz.	$2 25
29	Plated	"	2 75



WINDOW LIFT.

No. 30	Bronze	Per doz.	$2 25
30	Plated	"	2 25



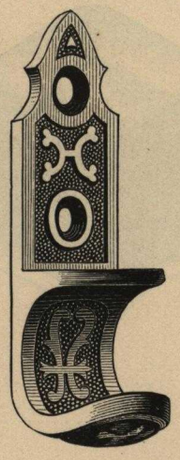
WINDOW LIFT.

No. 31	Bronze	Per doz.	$1 50
31	Plated	"	1 50

SASH LIFTS.

(WINDOW LIFTS.)

(Full Size.)



WINDOW BLIND LIFT.

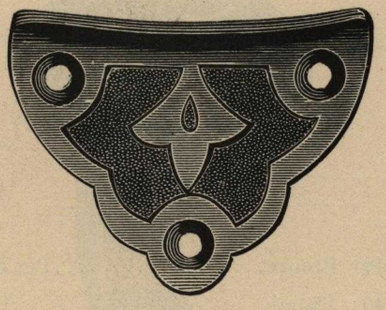
No. 32 Bronze ..... Per doz. $1 40
32 Plated..... " 1 40

WINDOW BLIND LIFT.

No. 33 Bronze ..... Per doz. $1 40
33 Plated ..... " 1 40

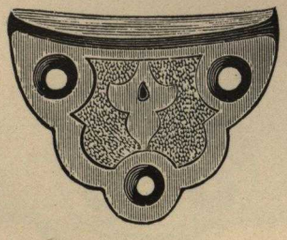
FLUSH WINDOW LIFT.

No. 34 Bronze ..... Per doz. $4 50
34 Plated..... " 5 00



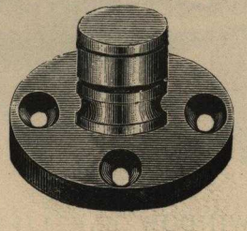
WINDOW LIFT.

No. 35 Brass..... Per doz. $1 75
35 Plated..... " 2 40
35 Bronze..... " 2 40



WINDOW LIFT.

No. 36 Bronze..... Per doz. $1 50
36 Plated..... " 1 50



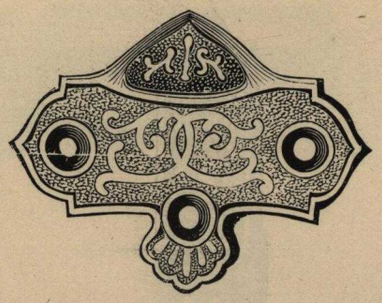
END DOOR SASH LIFT.

No. 37 Bronze ..... Per doz. $2 00
37 Plated..... " 2 00

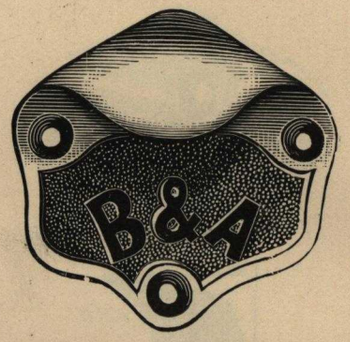
SASH LIFTS.

(WINDOW LIFTS.)

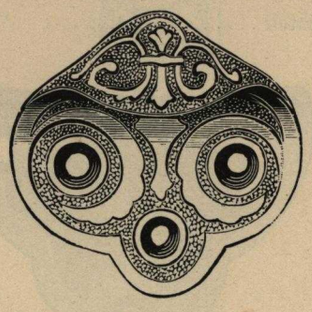
(Full Size.)



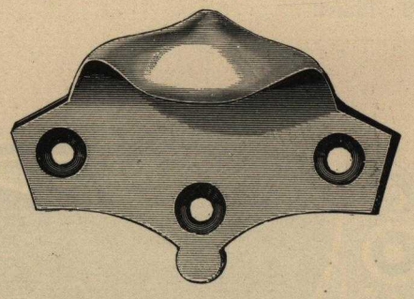
No. 38 Bronze.....Per doz. $2 00
38 Plated..... " 2 00



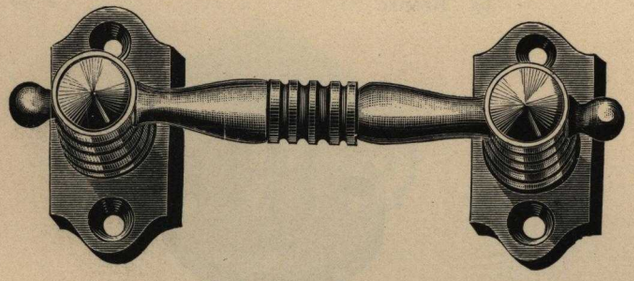
No. 39 Bronze.....Per doz. $2 25
39 Plated..... " 2 25



No. 40 Bronze.....Per doz. $2 25
40 Plated..... " 2 25



No. 41 Brass.....Per doz. $1 75
41 Plated..... " 2 25



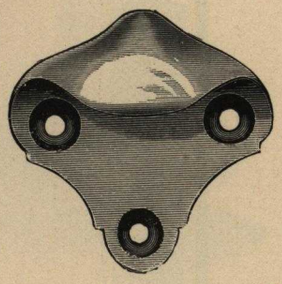
WINDOW BAR LIFT.

No. 42 Bronze.....Per doz. $6 00
42 Plated..... " 6 00

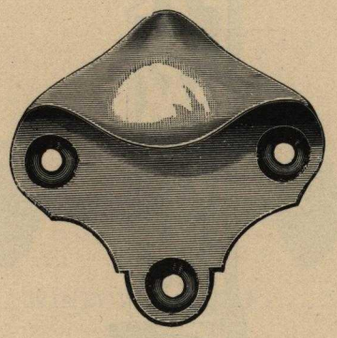
No. 43 Bronze.....Per doz. $1 20
43 Plated..... " 1 20

SASH LIFTS.

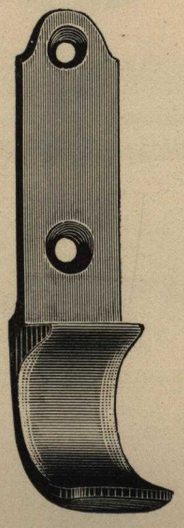
(WINDOW LIFTS.
(Full Size.)



No. 44 Brass ..... Per doz. $1 25
44 Plated ..... " 1 50

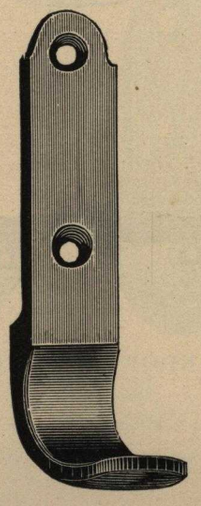


No. 45 Brass ..... Per doz. $1 75
45 Plated ..... " 2 25



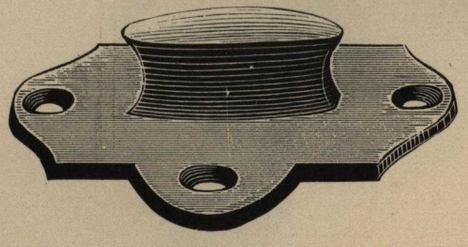
WINDOW BLIND LIFT.

No. 48 Brass ..... Per doz. $1 25
48 Plated ..... " 1 50

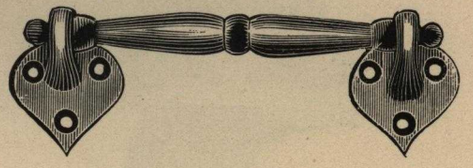


WINDOW BLIND LIFT.

No. 49 Brass ..... Per doz. $1 25
49 Plated ..... " 1 50



No. 51 Brass ..... Per doz. $2 50
51 Plated ..... " 3 00



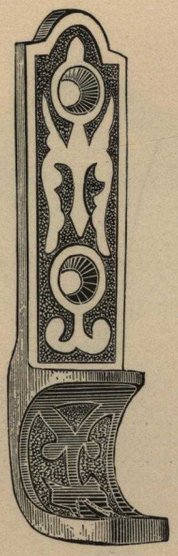
WINDOW BAR LIFT.
(One-half Size.)

No. 52 Brass ..... Per doz. $5 00
52 Plated ..... " 6 00
52 Bronze ..... " 6 00

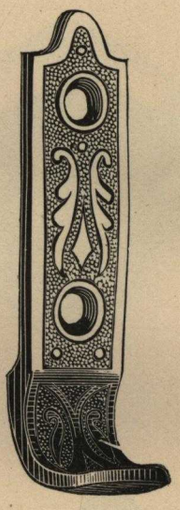
SASH LIFTS.

(WINDOW BLIND LIFTS.)

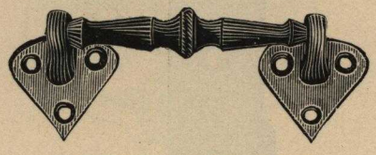
(Full Size.)



No. 53 Bronze ..... Per doz. $1 50
53 Plated ..... " 1 50



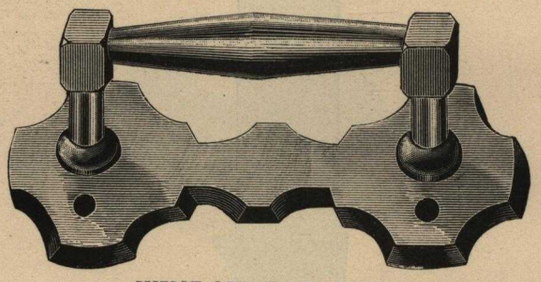
No. 54 Bronze ..... Per doz. $1 50
54 Plated ..... " 1 50



WINDOW BAR LIFT.

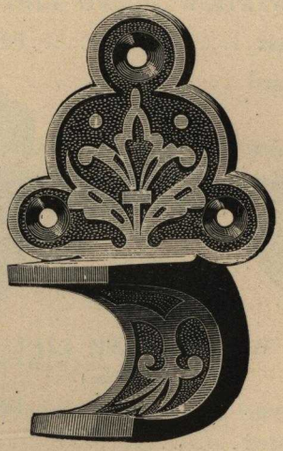
One-half Size.

No. 55 Brass ..... Per doz. $4 00
55 Plated ..... " 5 00

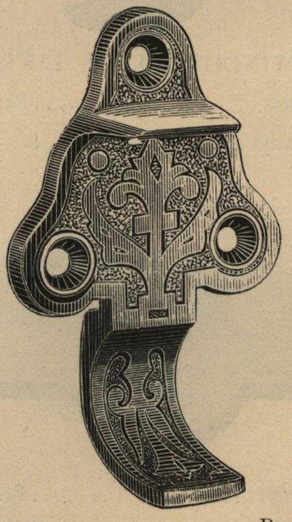


WINDOW BAR LIFT.

No. 56 Brass ..... Per doz. $5 00
56 Bronze ..... " 6 00
56 Plated ..... " 6 00



No. 57 Bronze ..... Per doz. $2 40
57 Plated ..... " 2 40

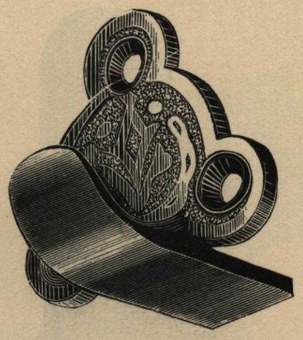


No. 58 Bronze ..... Per doz. $2 40
58 Plated ..... " 2 40

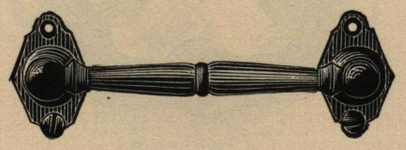
SASH LIFTS.

(WINDOW BLIND LIFTS.)

(Full Size.)



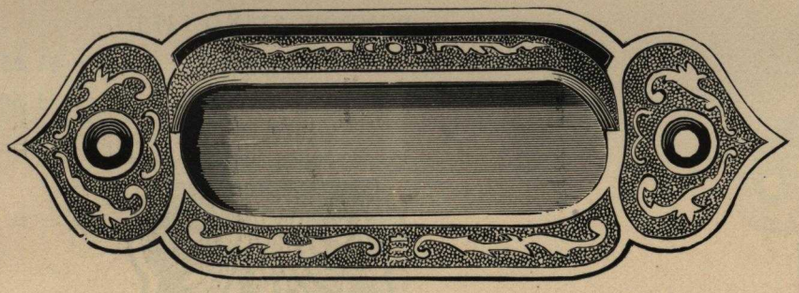
No. 59 Bronze.....Per doz. $2 40
59 Plated..... " 2 40



WINDOW BAR LIFT.

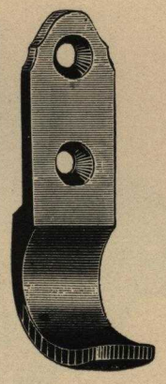
One-half Size.

No. 60 Brass.....Per doz. $4 00
60 Plated..... " 5 00

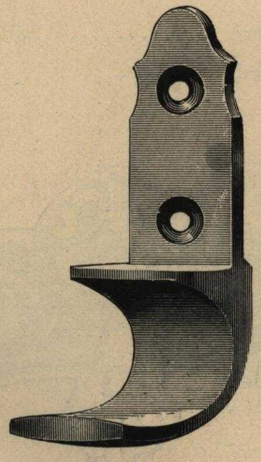


FLUSH WINDOW LIFT.

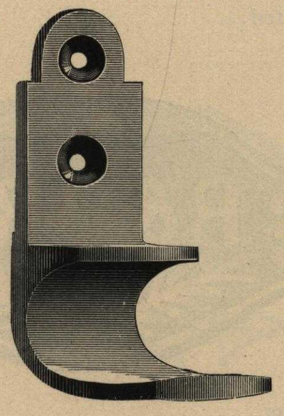
No. 61 Bronze.....Per doz. $6 00
61 Plated..... " 6 00



No. 62 Brass....Per doz. $1 25
62 Plated... " 1 50



No. 63 Brass.....Per doz. $1 25
63 Plated..... " 1 50

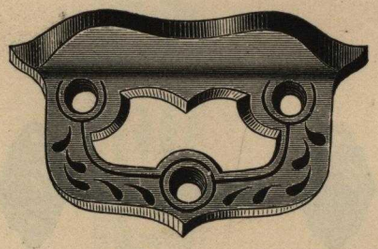


No. 64 Brass.....Per doz. $1 25
64 Plated..... " 1 50

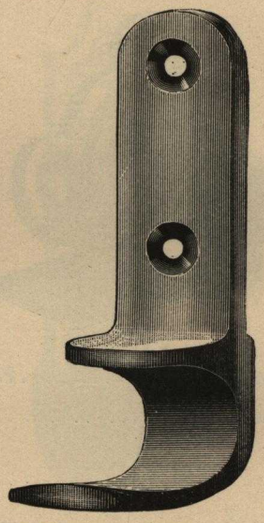
SASH LIFTS.

(WINDOW LIFTS.)

(Full Size.)

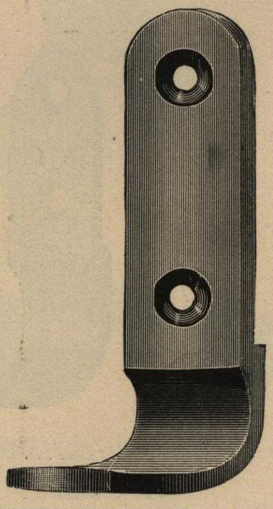


No. 65 Bronze ..... Per doz. $1 50
65 Plated ..... " 1 50



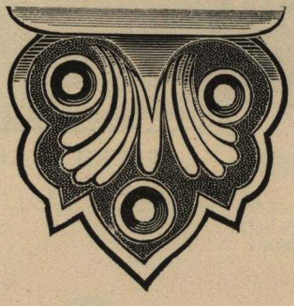
WINDOW BLIND LIFT.

No. 66 Brass ..... Per doz. $1 25
66 Plated ..... " 1 50



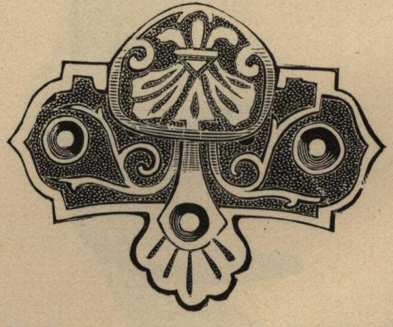
WINDOW BLIND LIFT.

No. 67 Brass ..... Per doz. $1 25
67 Plated ..... " 1 50



No. 68 Bronze ..... Per doz. $2 00
68 Plated ..... " 2 00

No. 71 Brass ..... Per doz. $2 75
71 Plated ..... " 3 25
71 Bronze ..... " 3 25

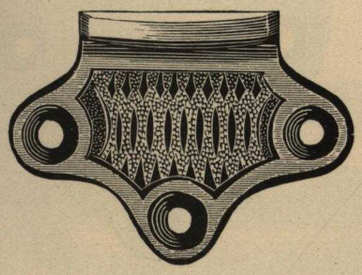


No. 73 Bronze ..... Per doz. $2 00
73 Plated ..... " 2 00

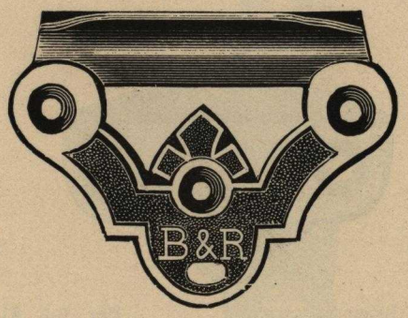
SASH LIFTS.

(WINDOW LIFTS.)

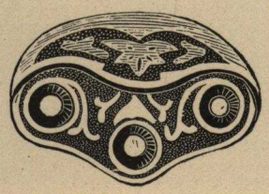
(Full Size.)



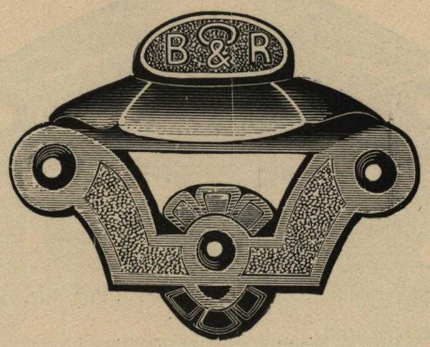
No. 74 Bronze.....Per doz. $2 00
74 Plated ..... " 2 00



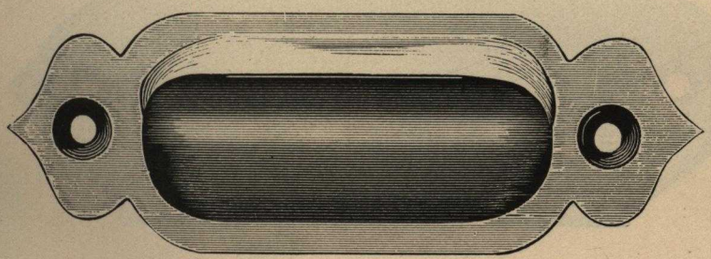
No. 75 Bronze.....Per doz. $2 25
75 Plated..... " 2 25



No. 76 Bronze.....Per doz. $1 50
76 Plated ..... " 1 50

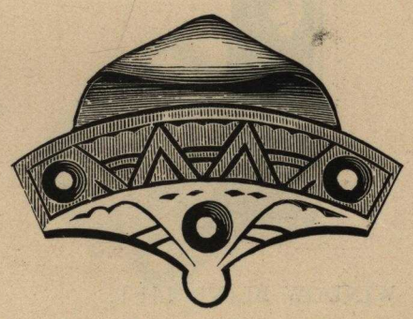


No. 77 Bronze .....Per doz. $2 25
77 Plated ..... " 2 25



FLUSH WINDOW LIFT.

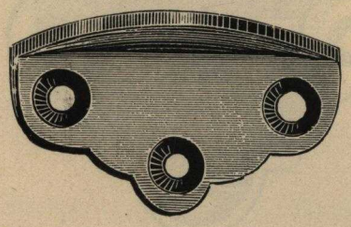
No. 78 Brass ....Per doz. $5 00
78 Plated ..... " 6 00



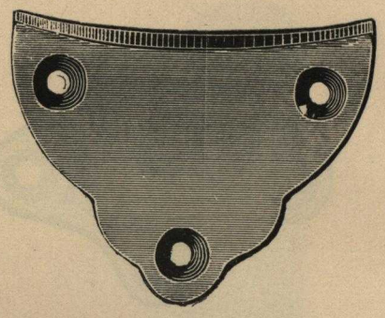
No. 79 Bronze.....Per doz. $2 50
79 Plated..... " 2 50

SASH LIFTS.

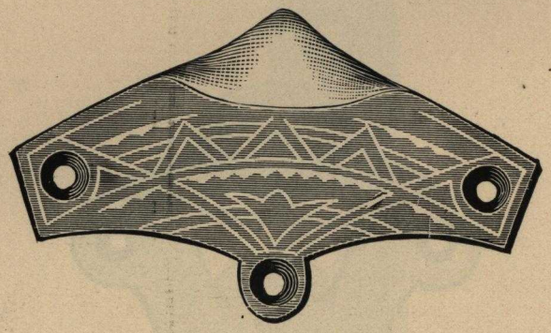
(WINDOW LIFTS.)
(Full Size.)



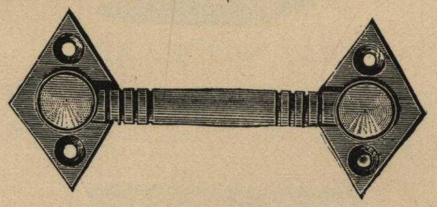
No. 80 Brass ..... Per doz. $1 25
80 Plated ..... " 1 50



No. 81 Brass ..... Per doz. $1 75
81 Plated ..... " 2 40



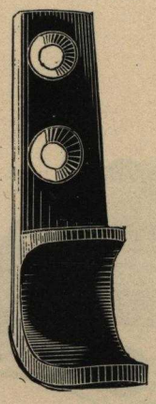
No. 82 Bronze ..... Per doz. $3 00
82 Plated ..... " 3 00



WINDOW BAR LIFT.

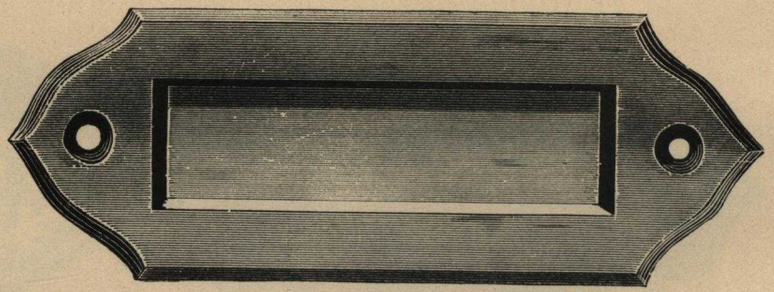
Three-quarter Size.

No. 83 Brass ..... Per doz. $5 00
83 Bronze ..... " 6 00
83 Plated ..... " 6 00



WINDOW BLIND LIFT.

No. 84 Brass ... Per doz. $1 25
84 Plated .. " 1 50



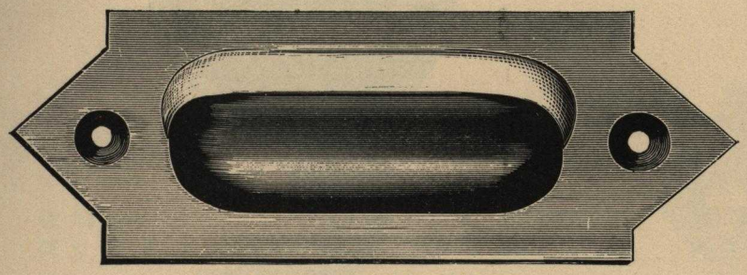
FLUSH WINDOW LIFT.

No. 85 Brass ..... Per doz. $5 00
85 Plated ..... " 6 00

SASH LIFTS.

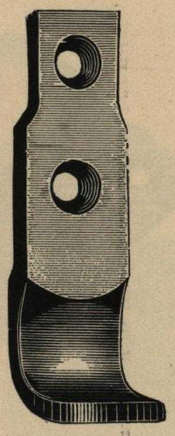
(WINDOW LIFTS.)

(Full Size.)



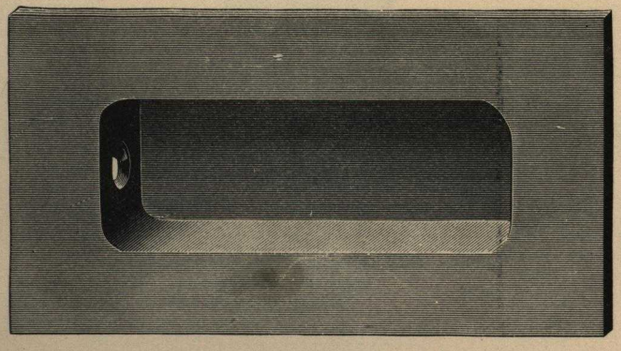
FLUSH WINDOW LIFT.

No. 86	Brass	Per doz.	$5 00
86	Plated	"	6 00



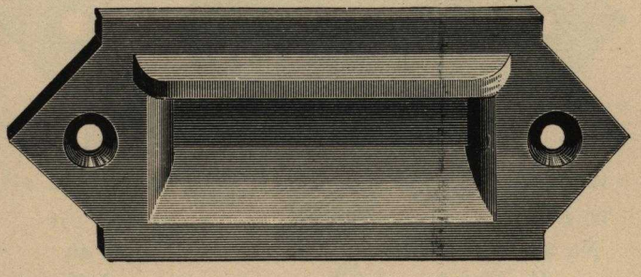
WINDOW BLIND LIFT.

No. 87	Brass	Per doz.	$1 25
87	Plated	"	1 50



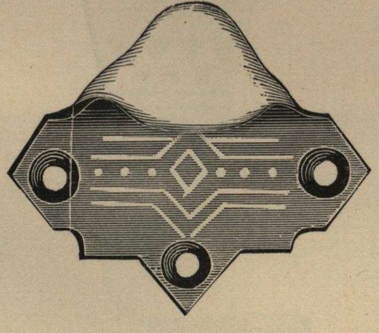
FLUSH WINDOW LIFT.

No. 88	Brass	Per doz.	$5 00
88	Bronze	"	6 00
88	Plated	"	6 00

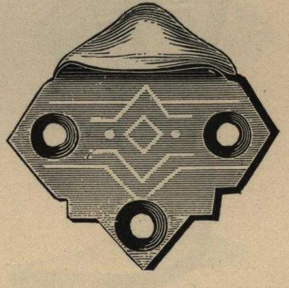


FLUSH WINDOW LIFT.

No. 89	Brass	Per doz.	$4 00
89	Plated	"	5 00



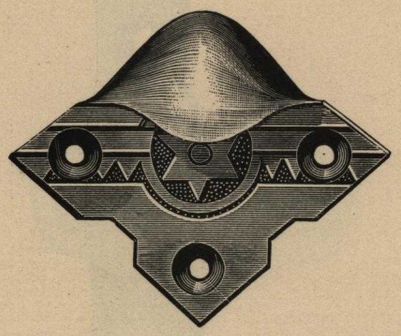
No. 90	Bronze	Per doz.	$2 50
90	Plated	"	2 50



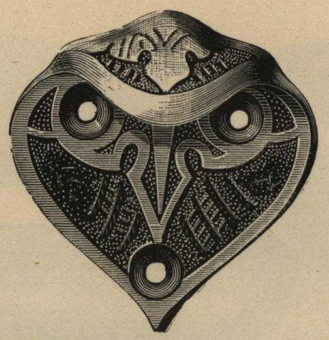
No. 91	Bronze	Per doz.	$2 00
91	Plated	"	2 00

SASH LIFTS.

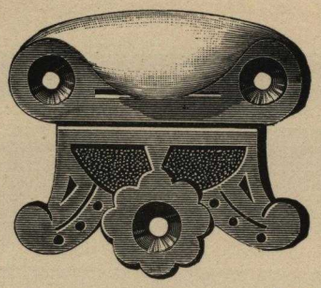
(WINDOW LIFTS.)
(Full Size.)



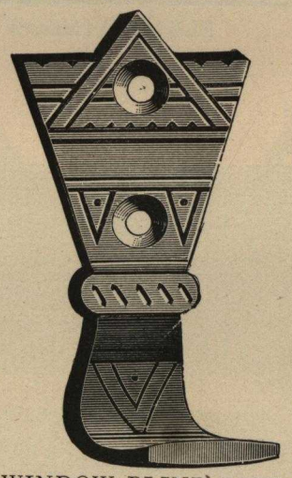
No. 92 Bronze .....Per doz. $2 50
92 Plated..... " 2 50



No. 93 Bronze .....Per doz. $2 25
93 Plated..... " 2 25

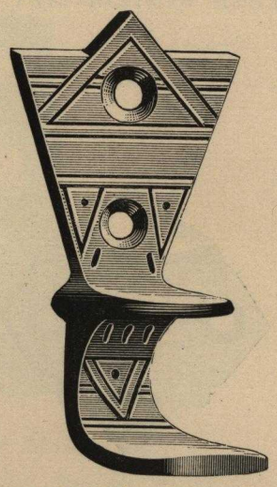


No. 94 Bronze .....Per doz. $2 40
94 Plated..... " 2 40



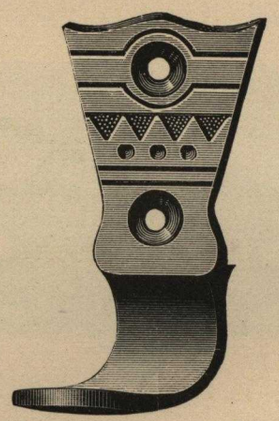
WINDOW BLIND LIFT.

No. 95 Bronze .....Per doz. $2 25
95 Plated..... " 2 25



WINDOW BLIND LIFT.

No. 96 Bronze .....Per doz. $2 40
96 Plated..... " 2 40



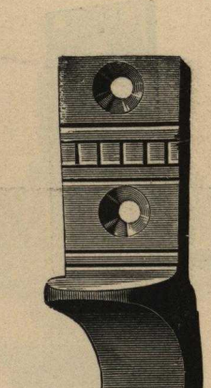
WINDOW BLIND LIFT.

No. 97 Bronze .....Per doz. $2 25
97 Plated..... " 2 25

SASH LIFTS.

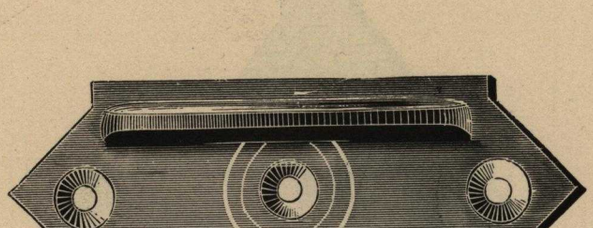
(WINDOW LIFTS.)

(Full Size.)



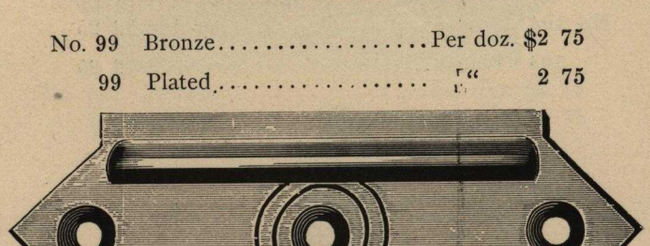
WINDOW BLIND LIFTS.

No. 98 Bronze.....Per doz. $2 00
98 Plated..... " 2 00

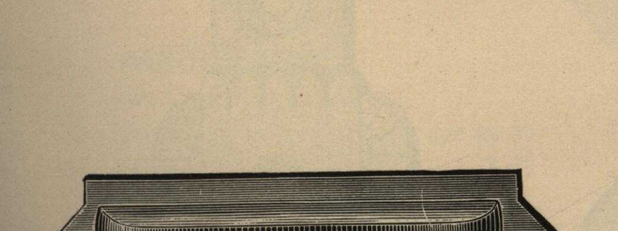


No. 99 Bronze.....Per doz. $2 75
99 Plated..... " 2 75

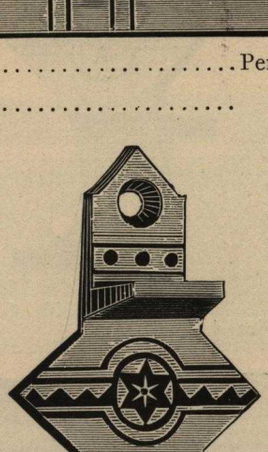
No. 100 Bronze.....Per doz. $3 00
100 Plated..... " 3 00



No. 101 Bronze.....Per doz. $3 00
101 Plated..... " 3 00



No. 102 Bronze.....Per doz. $3 00
102 Plated..... " 3 00



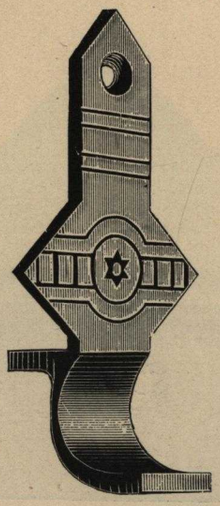
WINDOW BLIND LIFT.

No. 103 Bronze.....Per doz. $2 40
103 Plated..... " 2 40

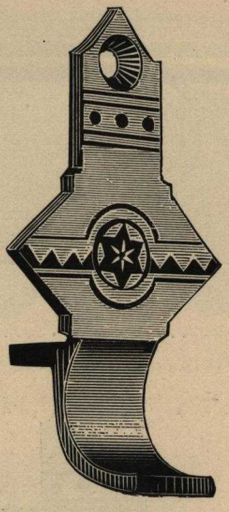
SASH LIFTS.

(WINDOW BLIND LIFTS.)

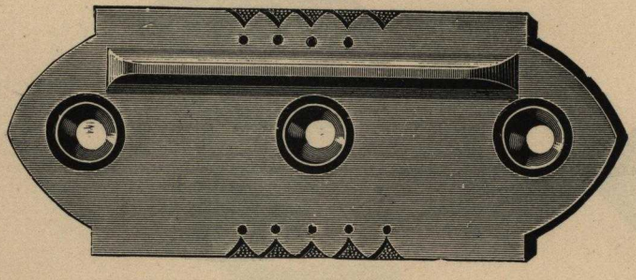
(Full Size.)



No. 104 Bronze.....Per doz. $2 25
104 Plated..... " 2 25

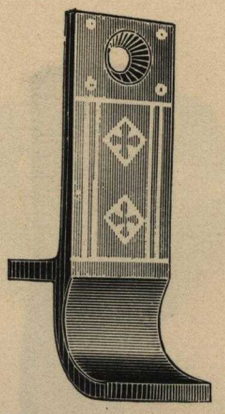


No. 106 Bronze.....Per doz. $2 25
106 Plated..... " 2 25

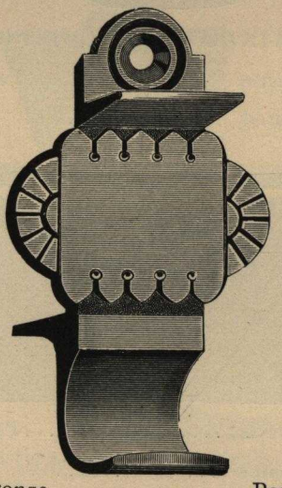


WINDOW LIFT.

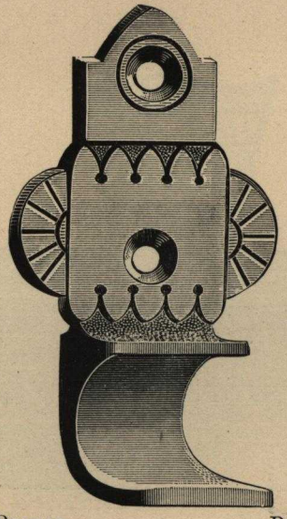
No. 109 Bronze.....Per doz. $3 00
109 Plated..... " 3 00



No. 105 Bronze.....Per doz. $2 00
105 Plated..... " 2 00



No. 107 Bronze.....Per doz. $2 50
107 Plated..... " 2 50

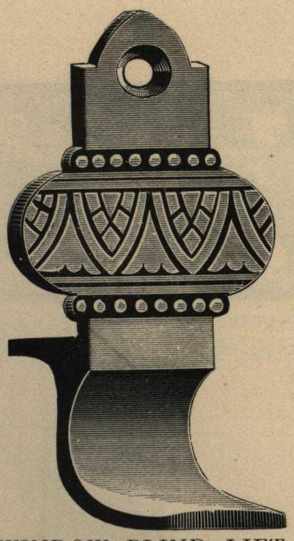


No. 108 Bronze.....Per doz. $2 50
108 Plated..... " 2 50

SASH LIFTS.

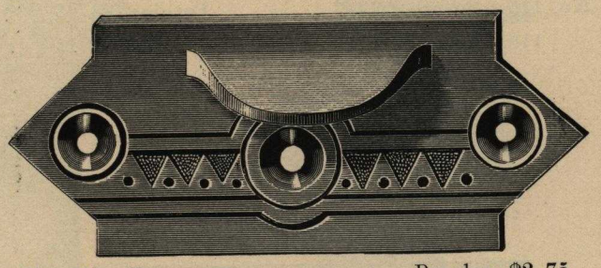
(WINDOW LIFTS.)

(Full Size.)

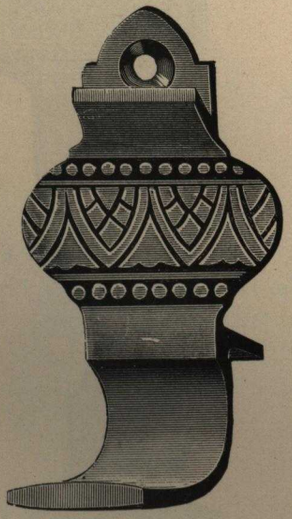


WINDOW BLIND LIFT.

No. 110 Bronze.....Per doz. $2 50
110 Plated..... " 2 50

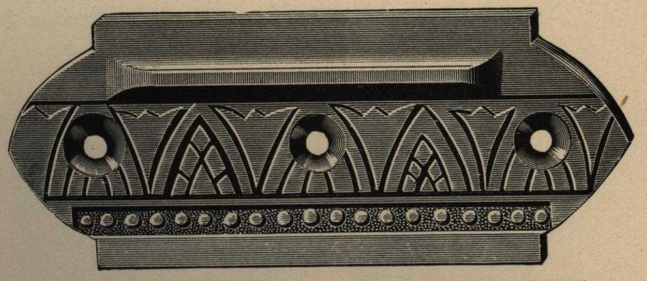


No. 111 Bronze.....Per doz. $2 75
111 Plated..... " 2 75

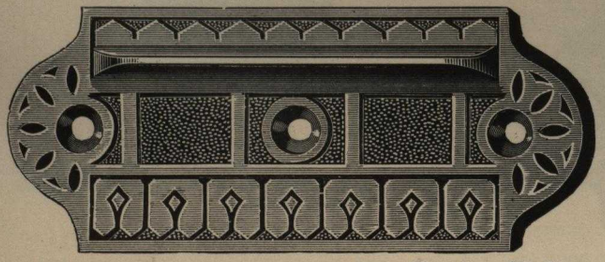


WINDOW BLIND LIFT.

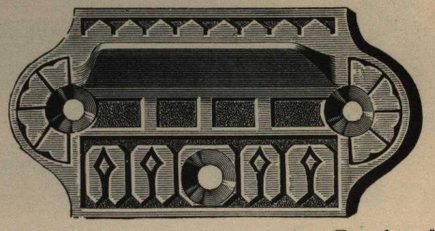
No. 112 Bronze.....Per doz. $2 50
112 Plated..... " 2 50



No. 113 Bronze.....Per doz. $3 25
113 Plated..... " 3 25



No. 114 Bronze.....Per doz. $3 25
114 Plated..... " 3 25



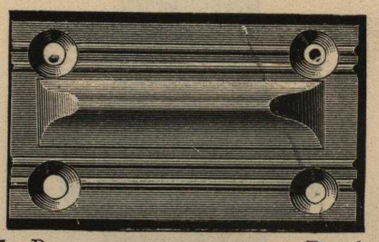
No. 115 Bronze.....Per doz. $2 50
115 Plated..... " 2 50

SASH LIFTS.

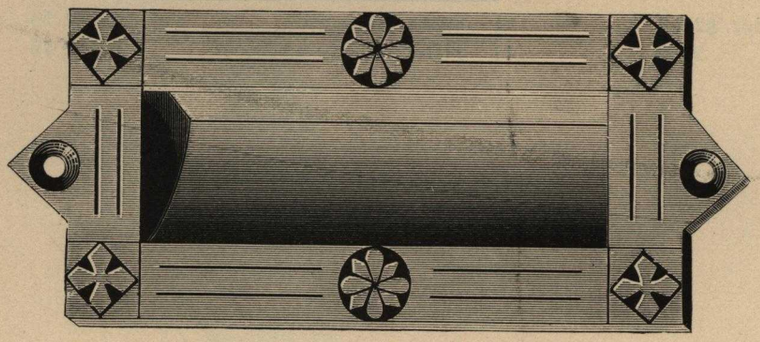
(WINDOW LIFTS.)

(Full Size.)

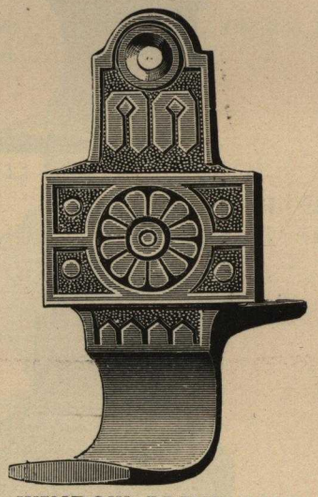
No. 116 Bronze.....Per doz. $3 25
116 Plated..... " 3 25



No. 117 Bronze.....Per doz. $2 75
117 Plated..... " 2 75

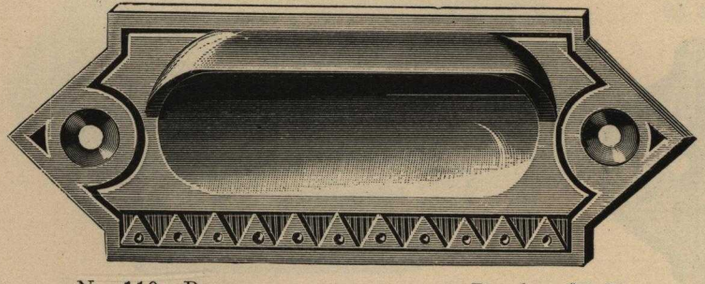


No. 118 Bronze.....Per doz. $6 00
118 Plated..... " 6 00

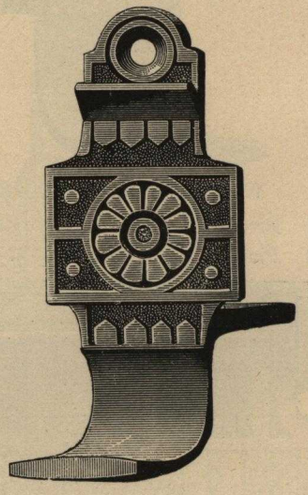


WINDOW BLIND LIFT.

No. 120 Bronze.....Per doz. $2 50
120 Plated..... " 2 50



No. 119 Bronze.....Per doz. $6 00
119 Plated..... " 6 00



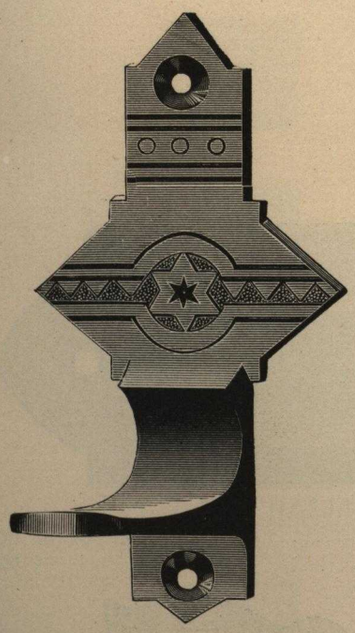
WINDOW BLIND LIFT.

No. 121 Bronze.....Per doz. $2 50
121 Plated..... " 2 50

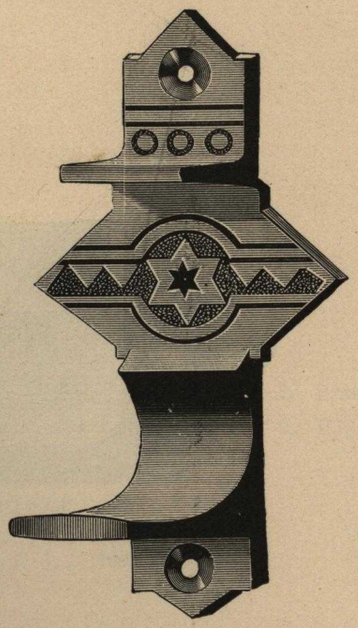
SASH LIFTS.

(WINDOW BLIND LIFTS.)

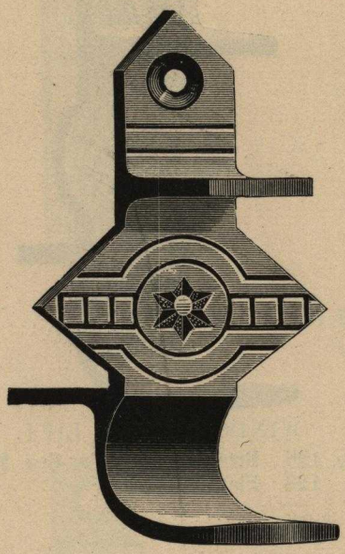
(Full Size.)



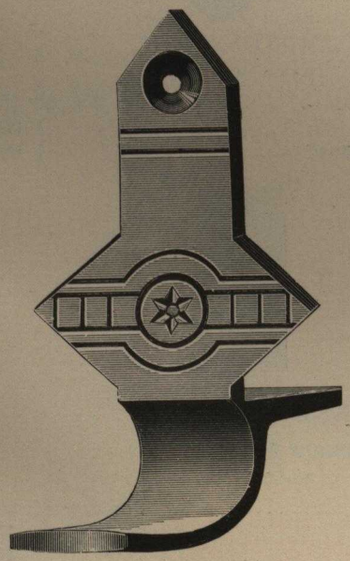
No. 122 Bronze ... Per doz. $2 50
122 Plated ... " 2 50



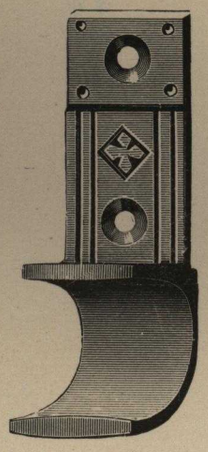
No. 123 Bronze... Per doz. $2 50
123 Plated ... " 2 50



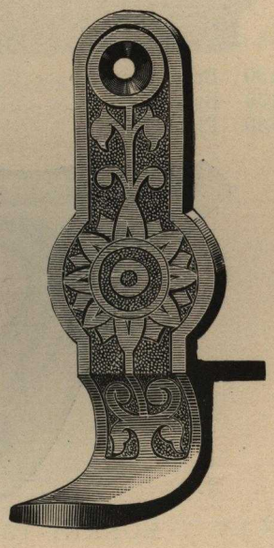
No. 124 Bronze ... Per doz. $2 40
124 Plated .... " 2 40



No. 125 Bronze ... Per doz. $2 40
125 Plated.... " 2 40



No. 126 Bronze... Per doz. $2 00
126 Plated ... " 2 00

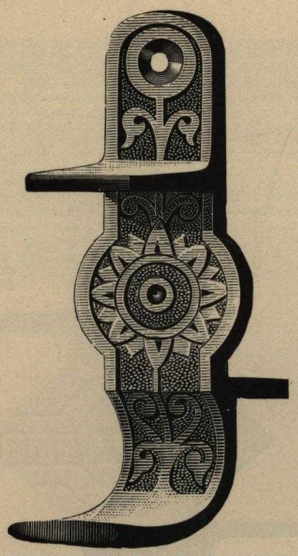


No. 127 Bronze ... Per doz. $2 25
127 Plated.... " 2 25

SASH LIFTS AND STOPS.

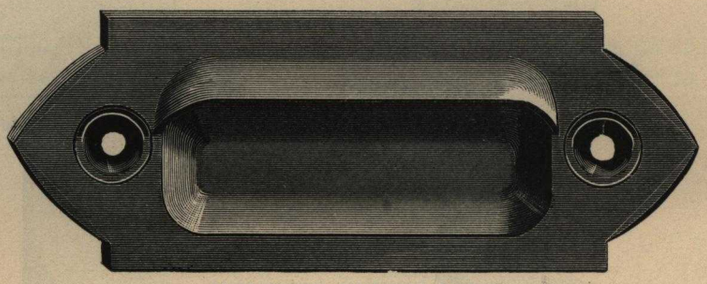
(WINDOW LIFTS.)

(Full Size.)



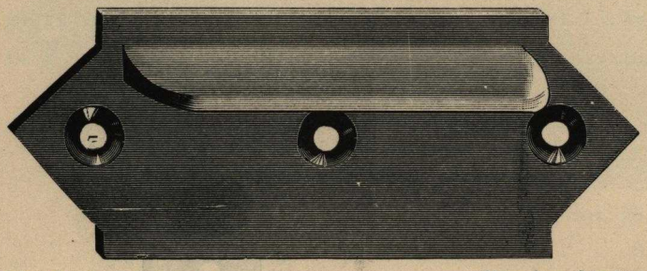
WINDOW BLIND LIFT.

No. 128	Bronze	Per doz.	$2 40
128	Plated	"	2 40

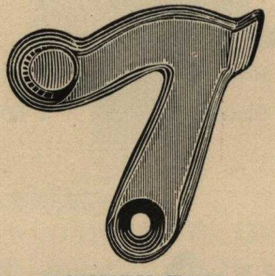


WINDOW FLUSH LIFT.

No. 129	Brass	Per doz.	$5 00
129	Plated	"	6 00



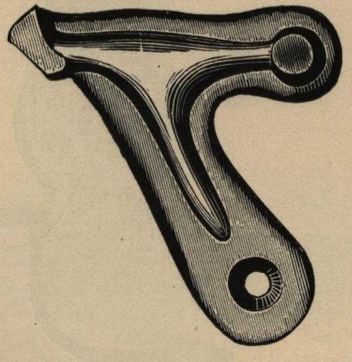
No. 130	Brass	Per doz.	$2 50
130	Bronze	"	3 00
130	Plated	"	3 00



MONKEY TAIL.

(WINDOW BUTTON.)

No. 1	Brass	Per doz.	$0 75
1	Plated	"	1 00
1	Bronze	"	1 00



MONKEY TAIL.

(WINDOW BUTTON.)

No. 2	Brass	Per doz.	$1 00
2	Plated	"	1 40
2	Bronze	"	1 40

MONKEY TAIL STOP.

(WINDOW BUTTON STOP.)

Four-fifths Size.

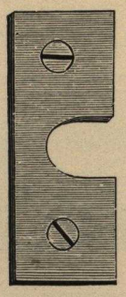
No. 1	Brass	Per doz.	$0 30
1	Bronze	"	45
1	Plated	"	45
2	Brass	"	45
2	Bronze	"	60
2	Plated	"	60

(No. 2 is same style as No. 1, except a little larger.)

SASH STOPS.

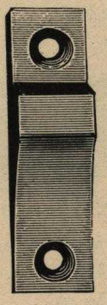
(WINDOW LATCH STOPS.)

(Full Size.)

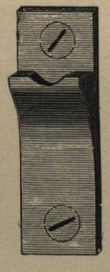


(WINDOW LATCH PLATE.)

No. 1 Brass ..... Per doz. $0 66
1 Plated ..... " 75

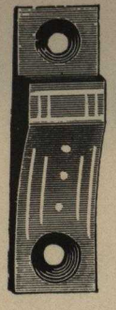


No. 2 Brass ..... Per doz. $0 66
2 Plated ..... " 75

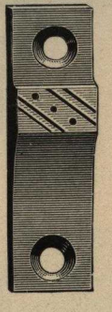


No. 3 Brass ..... Per doz. $0 66
3 Plated ..... " 75

No. 4 Bronze ..... Per doz. $0 75
4 Plated ..... " 75



No. 5 Bronze ..... Per doz. $0 75
5 Plated ..... " 75



No. 6 Bronze ..... Per doz. $0 75
6 Plated ..... " 75

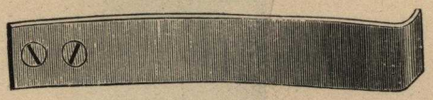
Sash Stops, Japanned ..... Per doz. $0 25

SASH SPRINGS.

(SINGLE WINDOW SASH SPRINGS.)

SASH SPRING.

No 22	Brass, 3½x½ in	Per doz.	$0 66
21	Steel, 3½x½ in	"	75
22	Plated, 3½x½ in	"	1 50



BLIND SPRING.

(SPRING WINDOW HOLDER.)

No. 25	Brass, 4½x¾ in	Per doz.	$0 66
24	" 3¾x⅝ in	"	66
24 and 25	Plated	"	1 50

SASH SPRING.

(DOUBLE WINDOW SASH SPRING.)

No. 23 Steel.....Per doz. $0 75

Three-quarters Size.

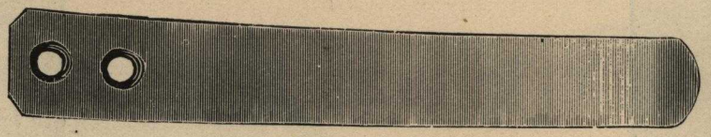
SASH SPRING.

No. 32 Brass.....Per doz. $0 66

Three-quarters Size.

SASH SPRING.

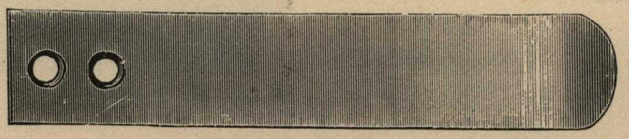
No. 27 Steel.....Per doz. $0 75



Three-quarters Size.

SASH SPRING.

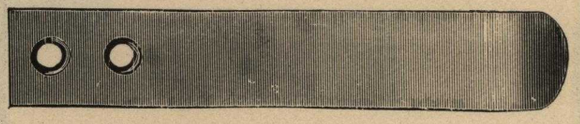
No. 28 Brass.....Per doz. $0 66



Three-quarters Size.

SASH SPRING.

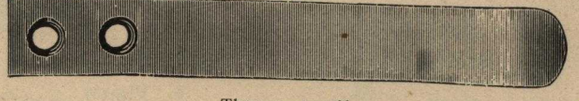
No. 29 Brass.....Per doz. $0 66



Three-quarters Size.

SASH SPRING.

No. 30 Brass.....Per doz. $0 66



Three-quarters Size.

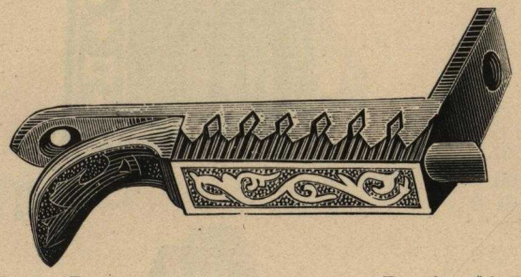
SASH SPRING.

No. 31 Brass.....Per doz. $0 66

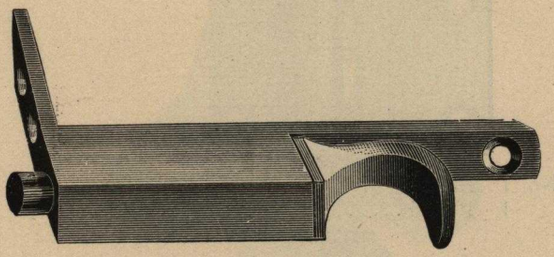
BLIND BOLTS.

(WINDOW BLIND BOLTS.)

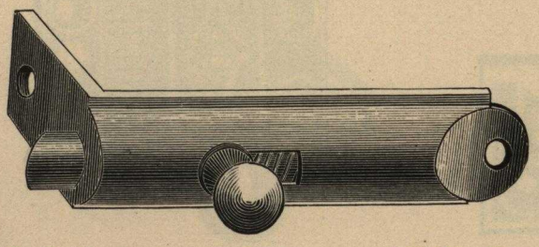
(Full Size.)



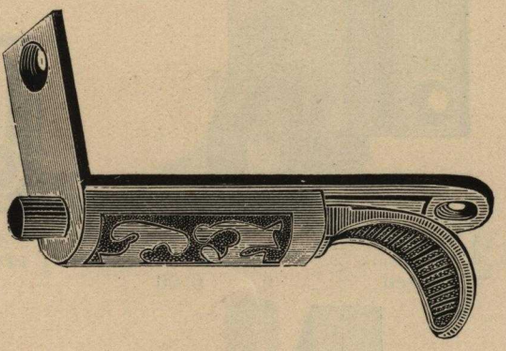
No. 1 Bronze ..... Per doz. $3 75
1 Plated ..... " 3 75



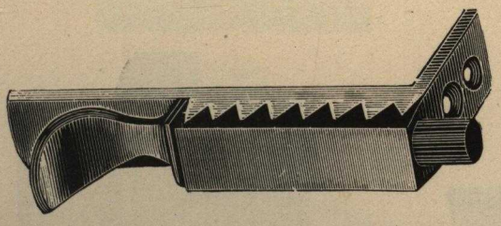
No. 2 Brass ..... Per doz. $3 25
2 Plated ..... " 3 75



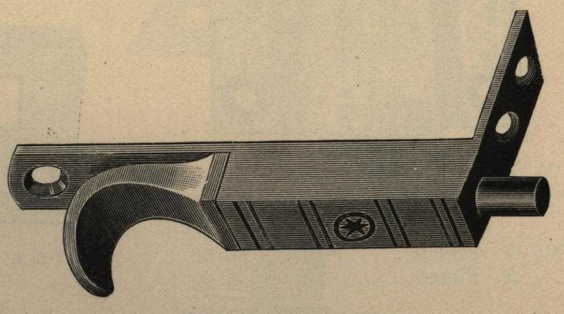
No. 3 Brass ..... Per doz. $3 25
3 Plated ..... " 3 75



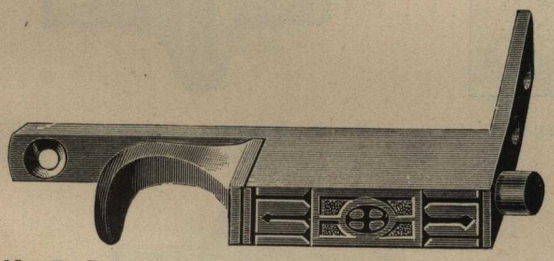
No. 4 Bronze ..... Per doz. $4 00
4 Plated ..... " 4 00



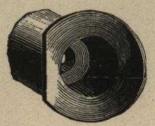
No. 5 Bronze ..... Per doz. $3 75
5 Plated ..... " 3 75



No. 6 Bronze ..... Per doz. $3 75
6 Plated ..... " 3 75

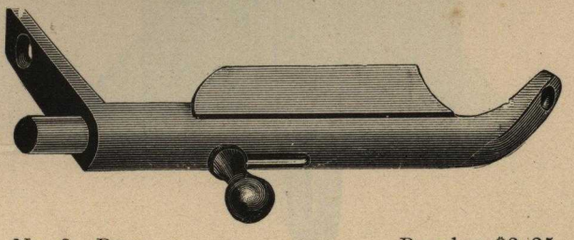


No. 7 Bronze ..... Per doz. $3 75
7 Plated ..... " 3 75



BLIND BOLT FERRULES.

No. 1 Brass ..... Per doz. $0 60
1 Bronze ..... " 75
1 Plated ..... " 75

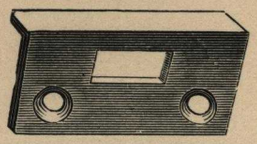


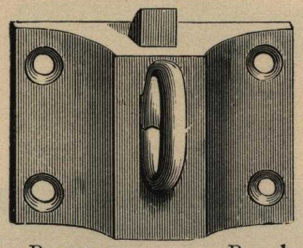
No. 8 Brass ..... Per doz. $3 25
8 Plated ..... " 3 75

DECK SASH CATCHES AND PLATES.

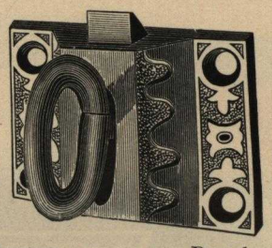
(CLEAR STORY WINDOW LATCHES.)

(Full Size.)

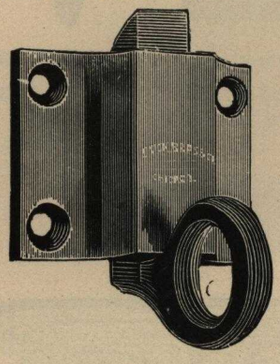




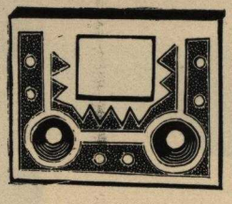
No. 1 Brass.....Per doz. $4 80
1 Plated..... " 6 00



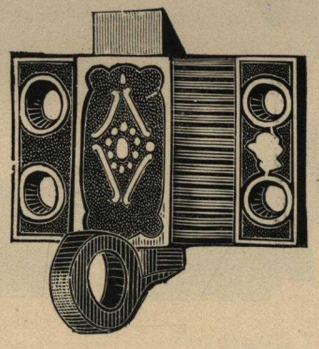
No. 2 Bronze.....Per doz. $6 00
2 Plated..... " 6 00



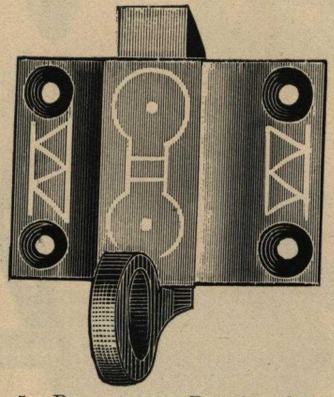
No. 3 Brass.....Per doz. $4 80
3 Plated..... " 6 00



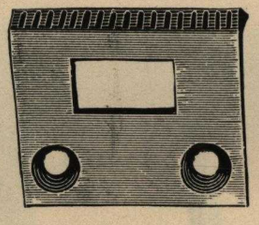
DECK SASH PLATE.



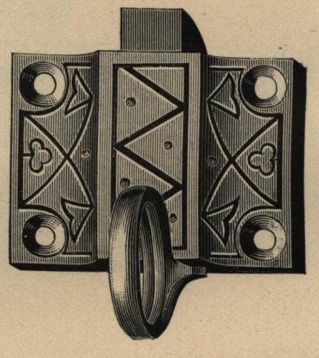
No. 4 Bronze.....Per doz. $6 00
4 Plated..... " 6 00



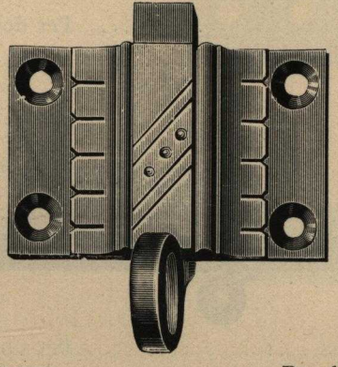
No. 5 Bronze.....Per doz. $6 00
5 Plated..... " 6 00



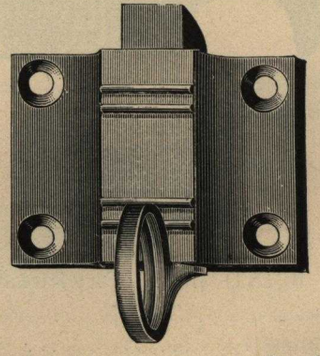
DECK SASH PLATE.



No. 6 Bronze.....Per doz. $6 00
6 Plated..... " 6 00



No. 7 Bronze.....Per doz. $6 00
7 Plated..... " 6 00

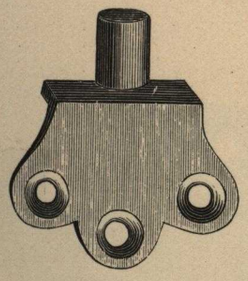


No. 8 Bronze.....Per doz. $6 00
8 Plated..... " 6 00

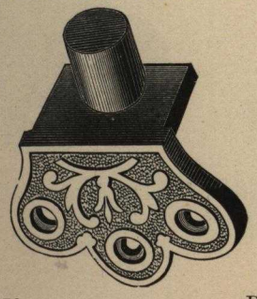
DECK SASH PIVOTS.

(CLEAR STORY WINDOW PIVOTS.)

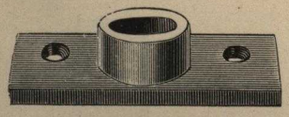
(Full Size.)

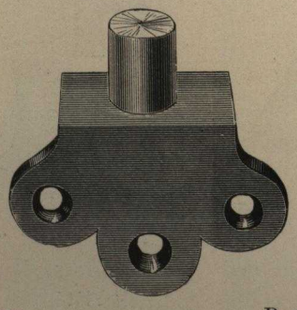


No. 1 Brass.....Per doz. $2 00
1 Plated..... " 2 40

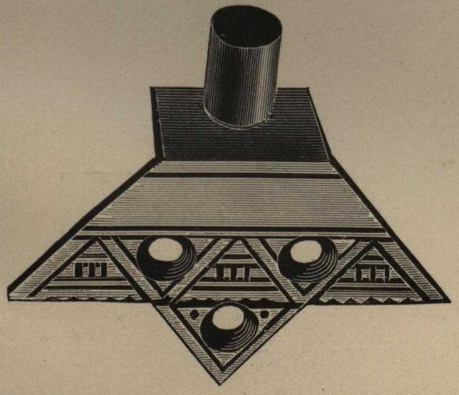


No. 3 Bronze.....Per doz. $2 40
3 Plated..... " 2 40

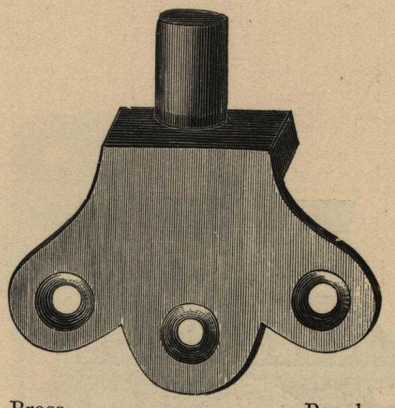




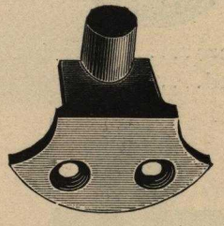
No. 6 Brass.....Per doz. $2 40
6 Bronze..... " 2 90



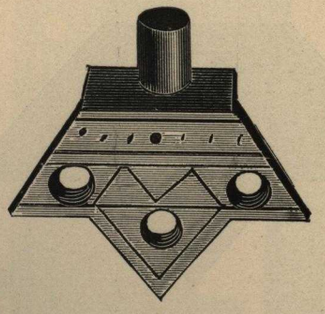
No. 8 Bronze.....Per doz. $4 80
8 Plated..... " 4 80



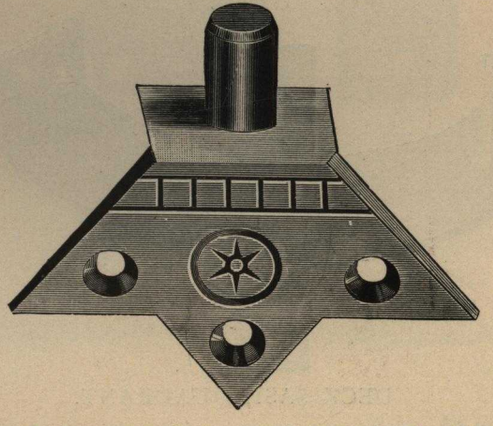
No. 2 Brass.....Per doz. $4 00
2 Plated..... " 4 80



No. 5 Brass.....Per doz. $2 00
5 Plated..... " 2 40



No. 7 Bronze.....Per doz. $2 40
7 Plated..... " 2 40

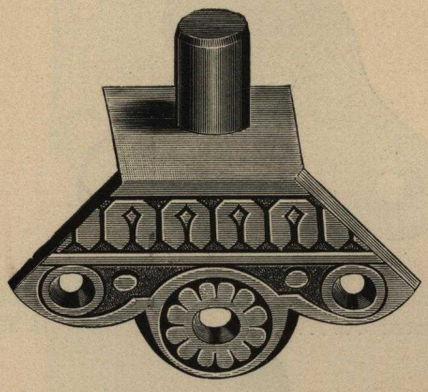


No. 9 Bronze.....Per doz. $4 80
9 Plated..... " 4 80

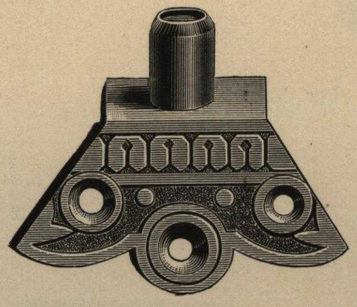
DECK SASH PIVOTS.

(CLEAR STORY WINDOW PIVOTS.)

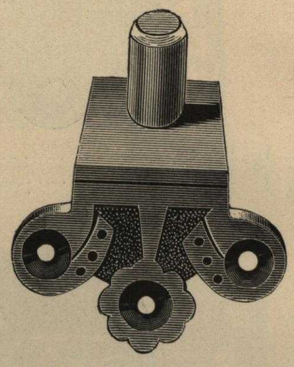
(Full Size.)



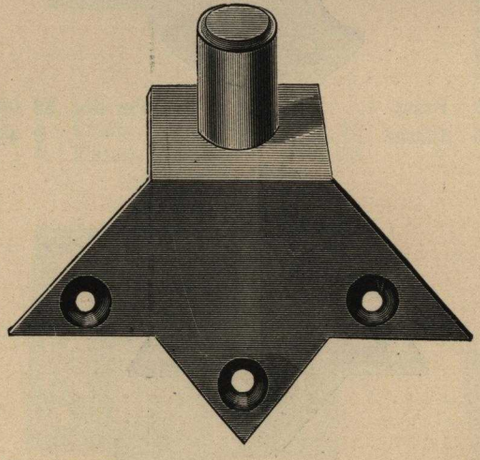
No. 10 Bronze.....Per doz. $4 80
10 Plated..... " 4 80



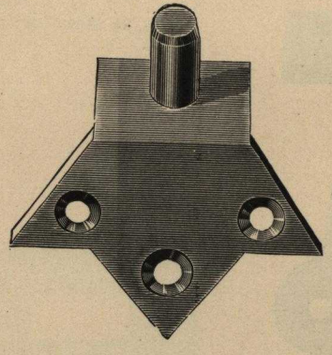
No. 11 Bronze...Per doz. $2 40
11 Plated... " 2 40



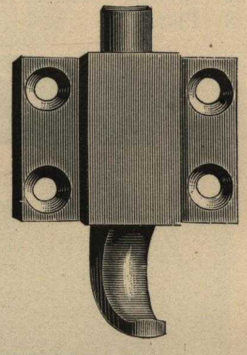
No. 12 Bronze..Per doz. $2 40
12 Plated.. " 2 40



No. 13 Brass .....Per doz. $4 00
13 Plated..... " 4 80

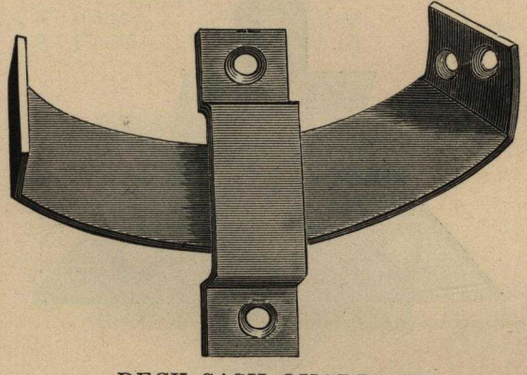


No. 14 Brass..Per doz. $2 00
14 Plated. " 2 40



SPRING PIVOT FOR MOVABLE SASH.

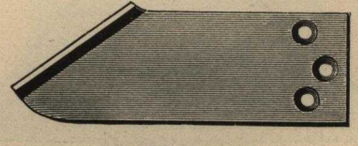
No. 15 Brass..Per doz. $3 00
15 Plated. " 4 00



DECK SASH QUADRANT.

(CLEAR STORY WINDOW SECTOR AND CLAMP.)

No. 1 Brass.....Per doz. pairs, $4 00



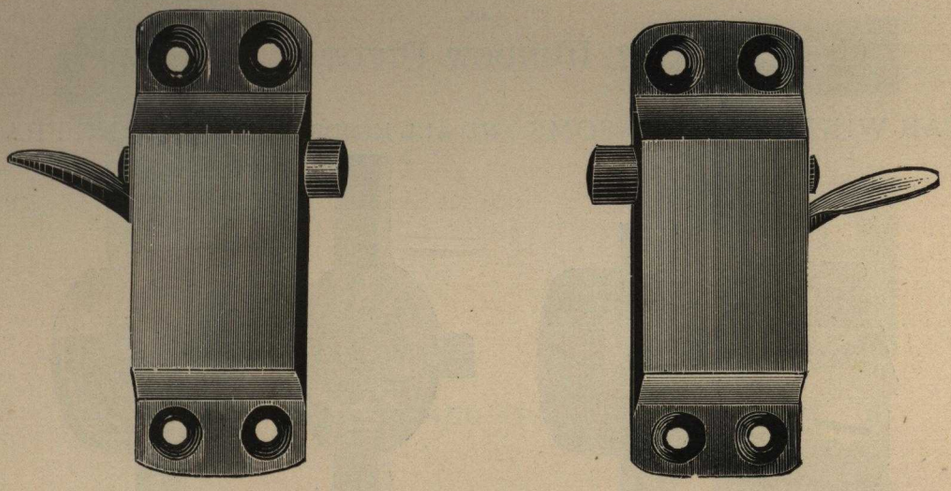
TRANSOM SASH STOP.

No. 1 4×1⅜ in Brass.....Per pair, $0 50
1 4×1⅜ " Plated ..... " 75

DECK SASH FIXTURES.

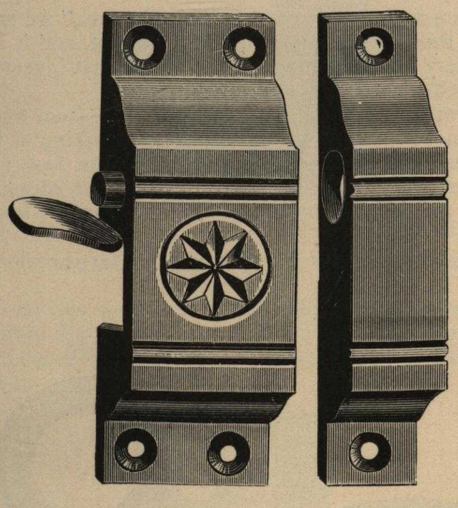
(CLEAR STORY SASH FIXTURES.)

(Full Size.)



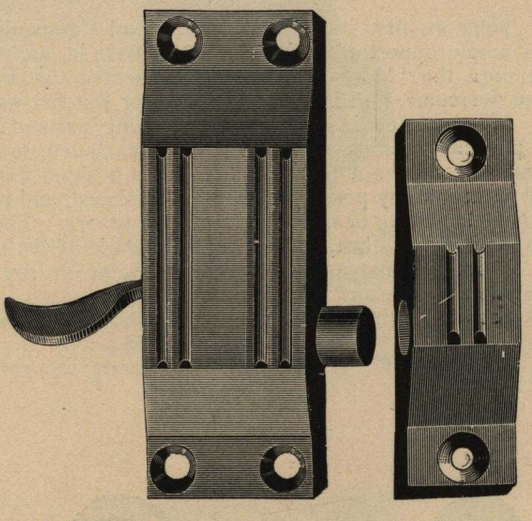
DECK SASH PIVOTS.

No. 4	Brass	Per pair,	$0 50
4	Plated	"	1 00



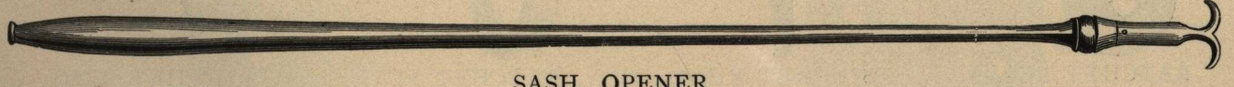
DECK SASH PIVOTS.

No. 16	Brass	Per pair,	$0 70
16	Bronze	"	1 20
16	Plated	"	1 20



DECK SASH PIVOTS.

No. 17	Brass	Per pair,	$0 70
17	Bronze	"	1 20
17	Plated	"	1 20



SASH OPENER.

(VENTILATOR STAFF.)

No. 1	Brass	Each,	$0 90
1	Plated	"	1 00

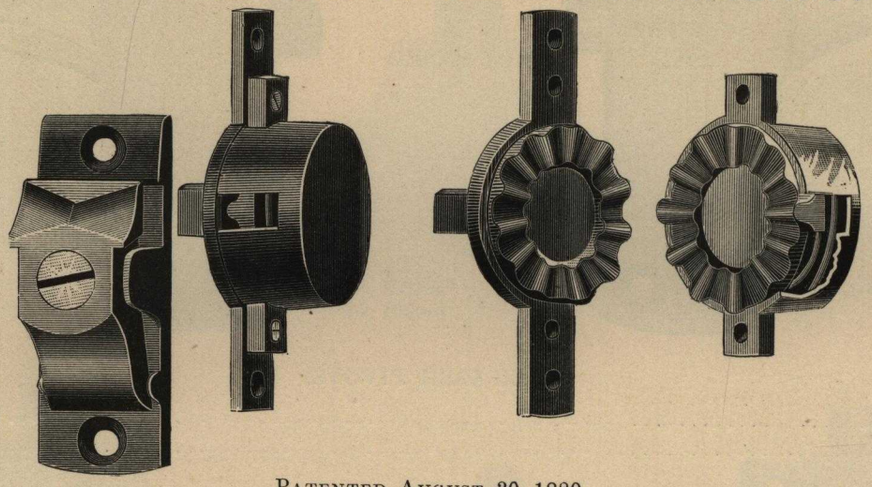
MORGAN'S

AUTOMATIC DECK SASH

OR

CLEAR STORY, WINDOW PIVOT AND CLAMP.

FOR CAR WINDOWS, TRANSOMS AND ALL KINDS OF REVOLVING FRAMES.



PATENTED AUGUST 30, 1880.

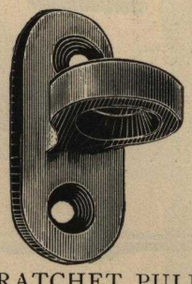
Since we first introduced to Railroad Companies, several years ago, the patent "Double Ratchet," we have had ample opportunity of noting the defects in, and objections to, those hitherto put upon the market, and it was not until the "Morgan" Pivot was presented that we felt that every objectionable feature had in that invention been overcome, and a Deck Sash Pivot or Ratchet was offered which was perfect in every particular.

When placed in position, the working parts of the Sash Pivot operate in an air-tight chamber, from which all particles of dust, rain or snow are excluded, so that there can be no impediment to the free working of the Pivot. It need not be removed from its position when car is being repaired or painted. It holds the Sash firm and secure in any position in which it is placed, and permits the removal of the same from its casing at pleasure, without loosening or removing the wood screws. The bearings of the working parts are large, and with ordinary use the Pivot will last, without repair, the life of the car.

From the above admirable features, we do not hesitate to pronounce the Morgan Ratchet far superior to any other extant, and ask for it at least a trial.

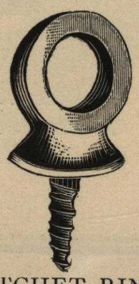
Samples, either loose or set in a Sash, will be sent for examination upon application.

Iron, Japanned, per gross $36 00



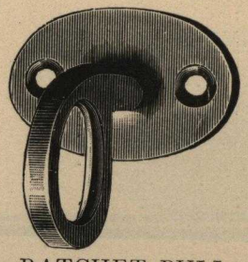
RATCHET PULL.
(Pull Ring or Clear Story Window Pull.)

No. 1 Brass..Per doz. $1.00
1 Plated. " 1.40



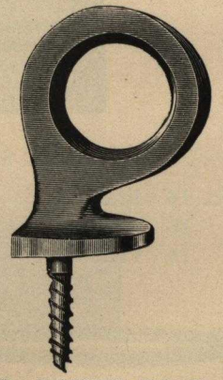
RATCHET RING.
(Pull Ring or Clear Story Window Pull.)

No. 2 Brass..Per doz. $1.00
2 Plated. " 1.40



RATCHET PULL.
(Pull Ring or Clear Story Window Pull.)

No. 3 Brass..Per doz. $1.00
3 Bronze. " 1.40
3 Plated. " 1.40

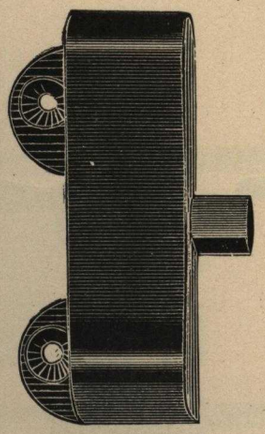


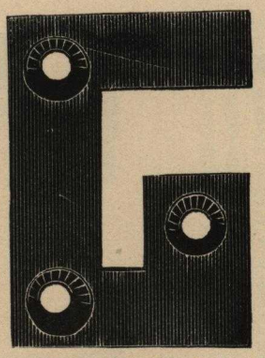
RATCHET RING.
(Pull Ring or Clear Story Window Pull.)

No. 4 Brass..Per doz. $1.00
4 Bronze. " 1.40
4 Plated.. " 1.40

DOUBLE RATCHETS.

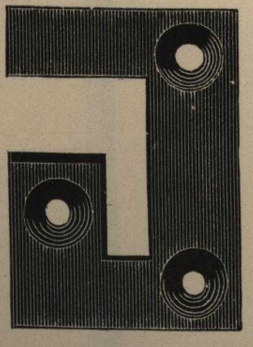
(WINDOW PIVOTS FOR DECK SASHES.)

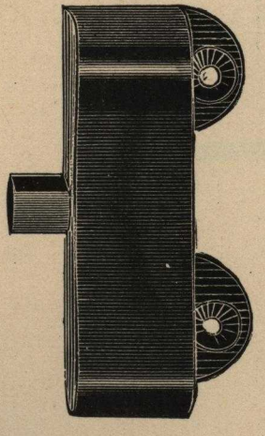




(WINDOW PIVOT PLATE.)

DOUBLE RATCHET AND PLATE. (RIGHT HAND).

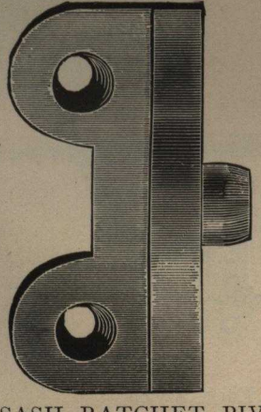




DOUBLE RATCHET AND PLATE. (LEFT HAND.)

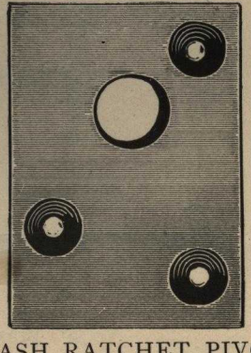
Price in Iron.....Per gross, **$30 00**

By this invention the Deck Sash may be opened to any desired angle, and firmly held there, obviating entirely the necessity of using cords, levers, pulleys, or any of the appliances now in use. They are simple, efficacious, and durable, and wherever used have stood the test and given entire satisfaction. They require no cutting away of the Sash.



DECK SASH RATCHET PIVOT.

Iron.....Per gross, **$8 50**



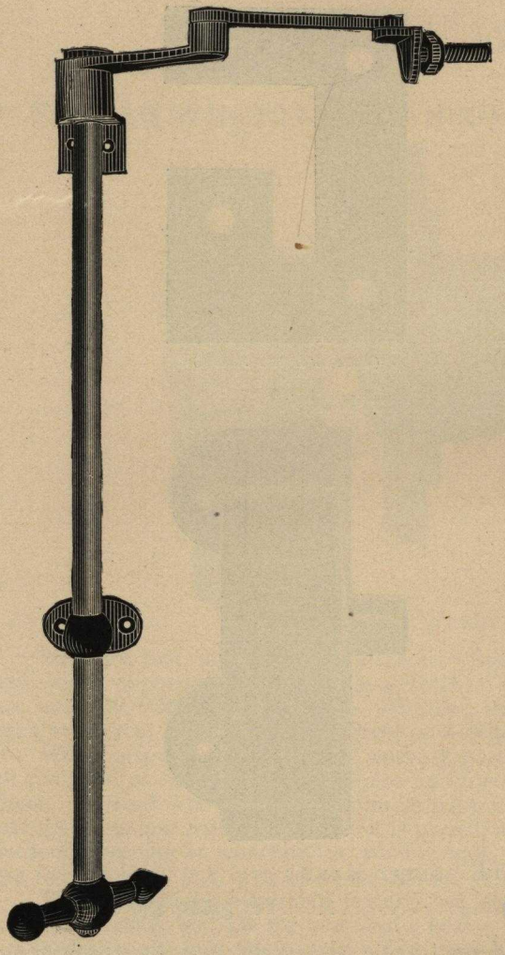
DECK SASH RATCHET PIVOT PLATE.

Iron.....Per gross, **$5 90**

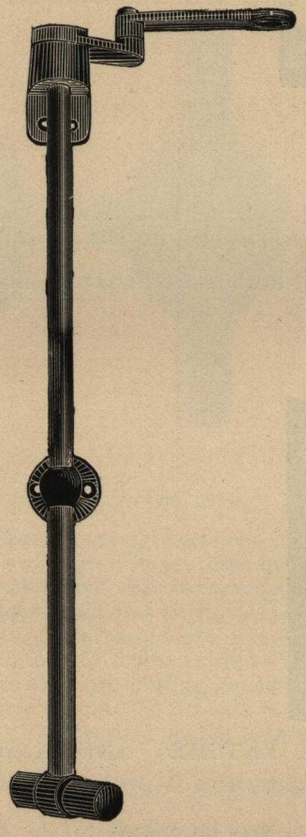
DECK SASH OPENERS.

(CLEAR STORY WINDOW OPENERS.)

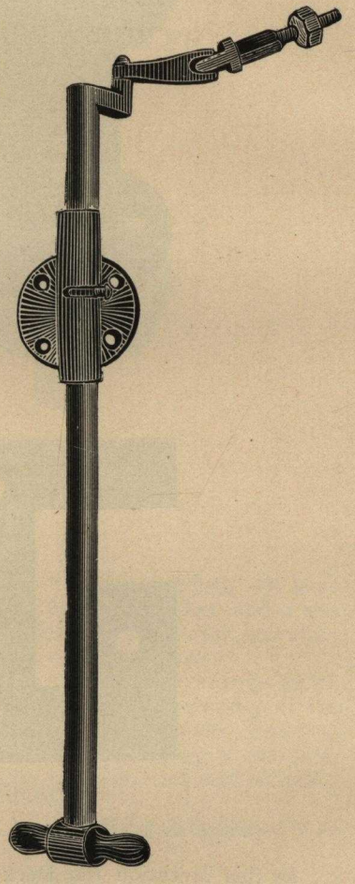
(Standard Sizes.)



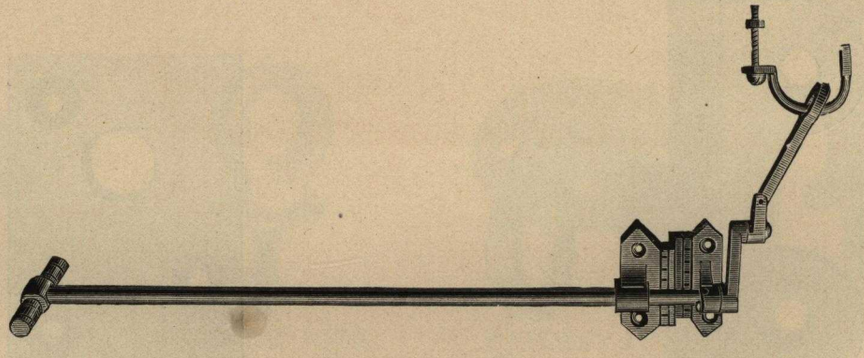
No. 3 Brass, 12 in..Each, $2 85
3 Bronze, " .. " 3 25
3 Plated, " .. " 3 25



No. 2 Brass, 12 in..Each, $2 60
2 Bronze, " .. " 2 90
2 Plated, " .. " 2 90



No. 4 Brass, 12 in..Each, $2 60
4 Bronze, " .. " 2 90
4 Plated, " .. " 2 90

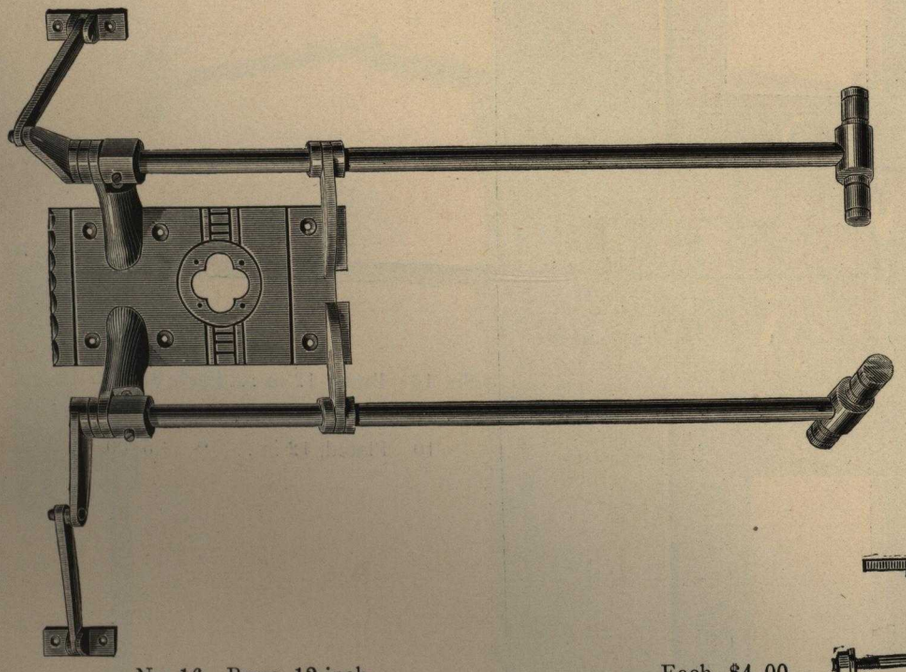


No. 5 Brass, 12 inch .....Each, $2 85
5 Bronze, " ..... " 3 30
5 Plated, " ..... " 3 30

DECK SASH OPENERS.

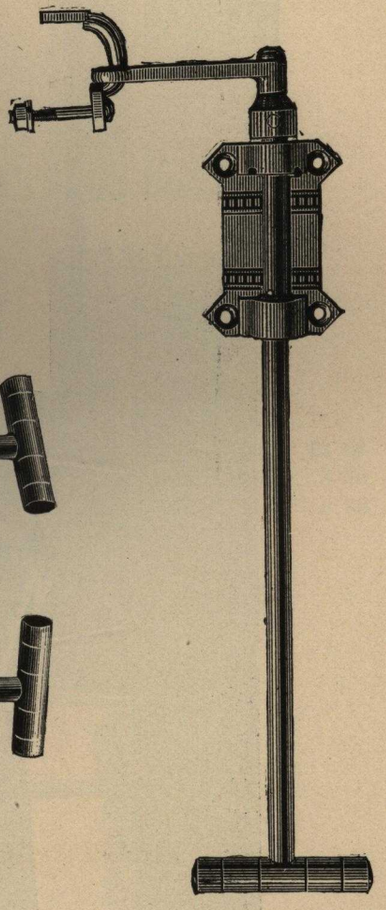
(CLEAR STORY WINDOW OPENERS.)

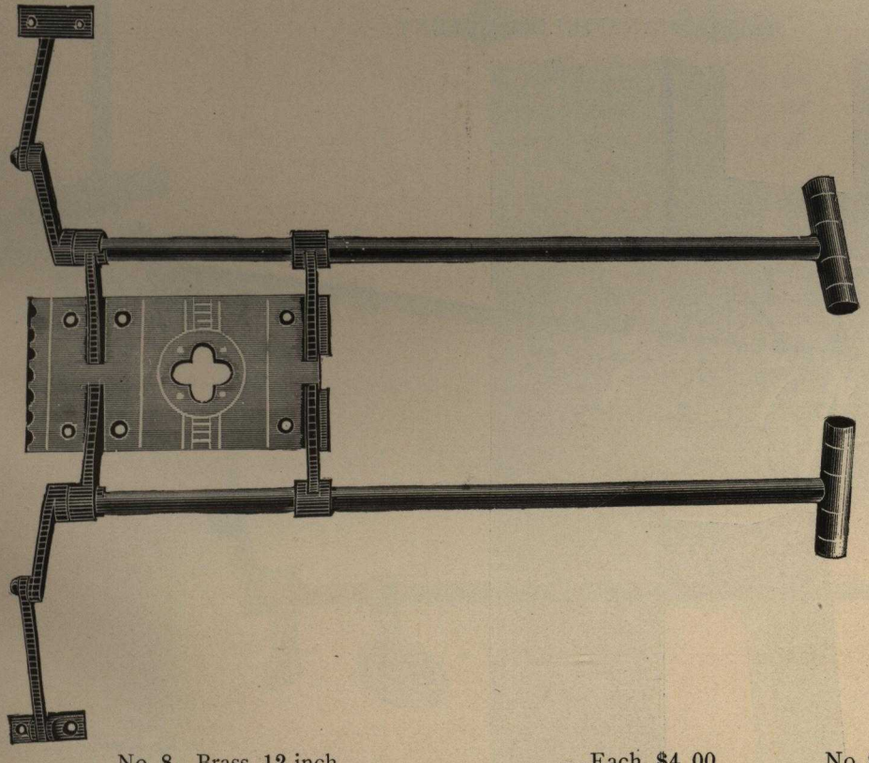
(Standard Sizes.)



NOTE.—Deck Sash Opener No. 16 has an improvement doing away with pin through rod of handle, making it both stronger and more perfect in action. We now make Deck Sash Openers Nos. 5, 8, 9, 10, 11 and 12 with same improvement.
Improvement Patented.

No. 16	Brass, 12 inch	Each,	$4	00
16	Bronze, "	"	5	00
16	Plated, "	"	5	00





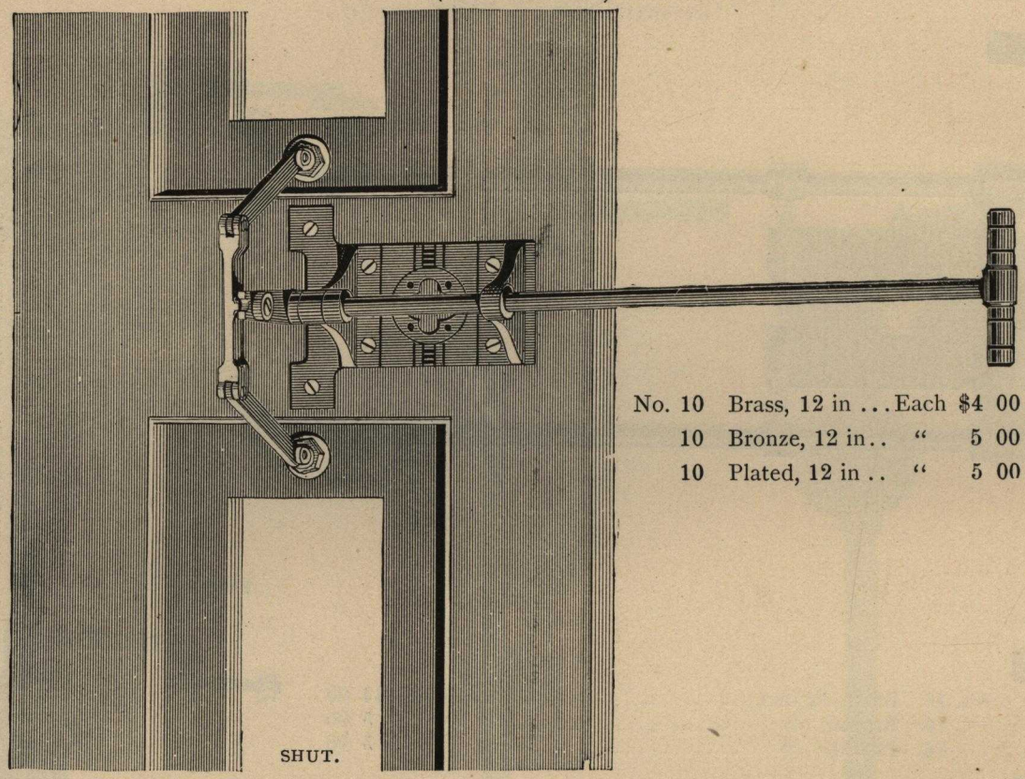
No 8	Brass, 12 inch	Each,	$4	00
8	Bronze, "	"	5	00
8	Plated, "	"	5	00

No. 9	Brass, 12 in.	Each,	$2	85
9	Bronze, " ..	"	3	30
9	Plated, " ..	"	3	30

DECK SASH OPENERS.

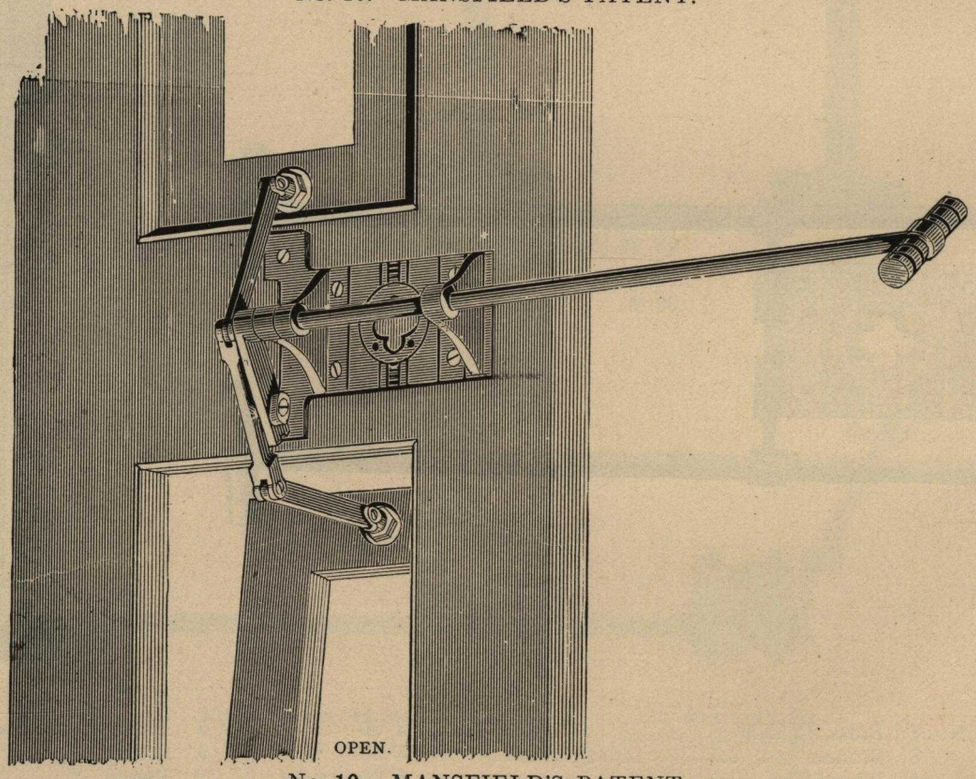
(CLEAR STORY WINDOW OPENERS.)

(Standard Sizes.)



No. 10	Brass, 12 in ... Each	$4 00
10	Bronze, 12 in.. "	5 00
10	Plated, 12 in .. "	5 00

No. 10. MANSFIELD'S PATENT.

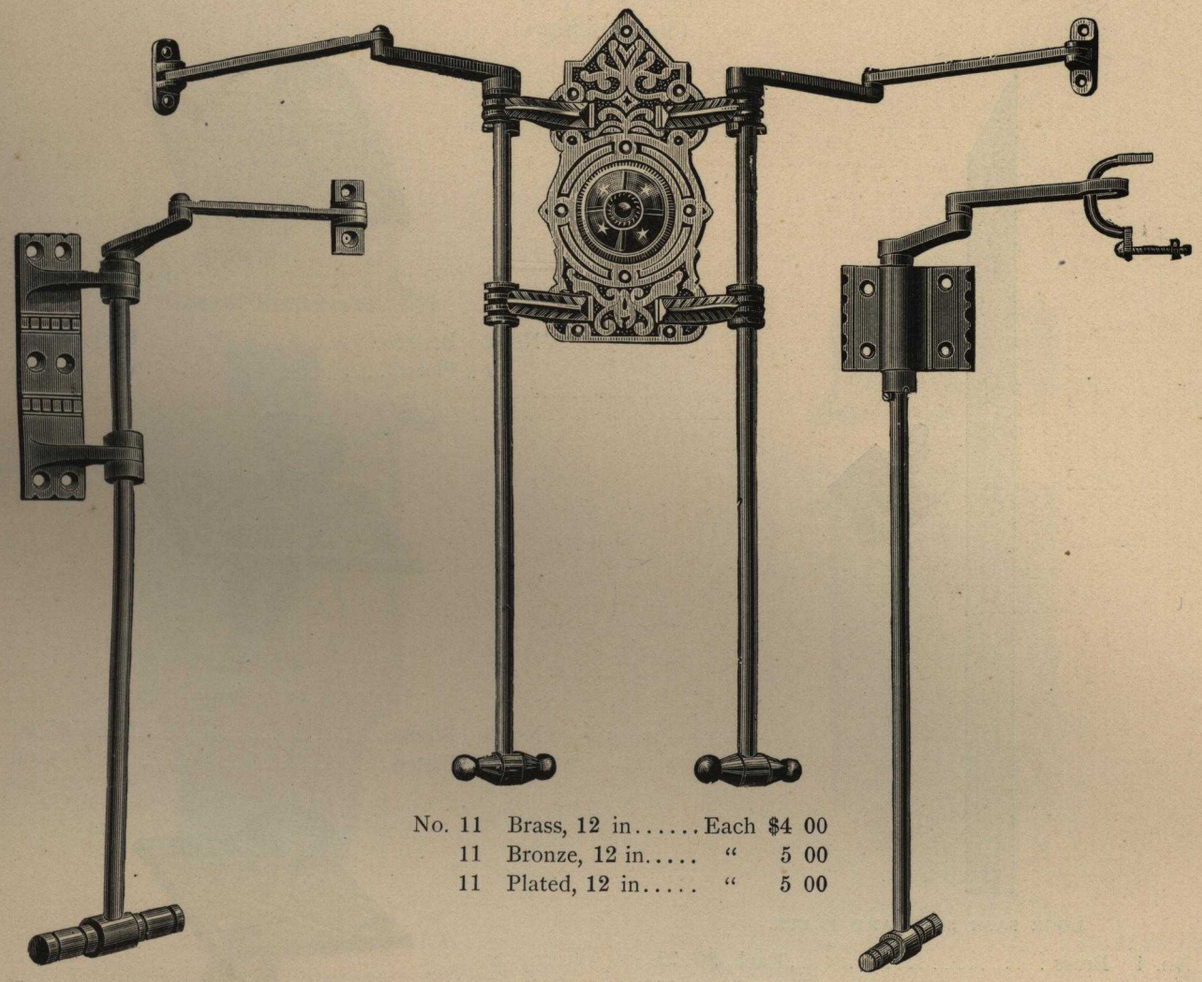


No. 10. MANSFIELD'S PATENT.

DECK SASH OPENERS.

(CLEAR STORY WINDOW OPENERS.)

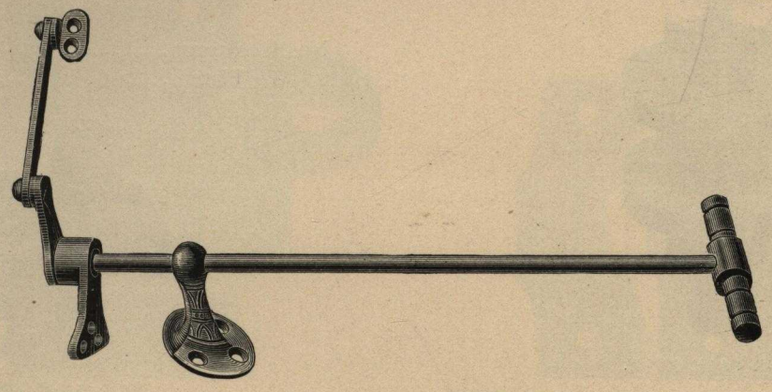
(Standard Sizes.)



No. 11 Brass, 12 in.....Each $4 00
11 Bronze, 12 in..... " 5 00
11 Plated, 12 in..... " 5 00

No. 6 Brass, 12 in ...Each $2 60
6 Bronze, 12 in .. " 2 90
6 Plated, 12 in... " 2 90

No. 12 Brass, 12 in ...Each $2 85
12 Bronze, 12 in.. " 3 30
12 Plated, 12 in... " 3 30

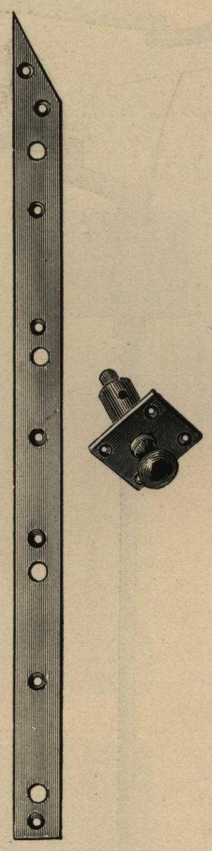


No. 13 Brass, 12 in .....Each $2 60
13 Bronze, 12 in..... " 2 90
13 Plated, 12 in..... " 2 90

OUTSIDE DOOR BOLTS AND STOPS.

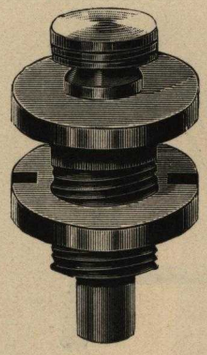
(DOOR SASH BOLTS AND PLATES.)

(Standard Sizes.)



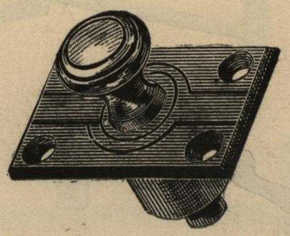
DOOR SASH BOLT AND PLATE.

No. 1 Brass ..... Each, $0 75
1 Plated ..... " 1 00



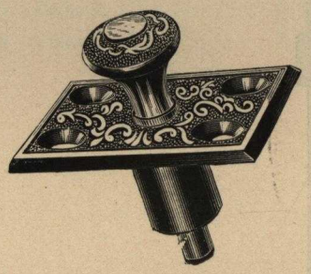
DOOR SASH BOLT.

No. 5 Brass ..... Each, $0 75
5 Bronze ..... " 1 00
5 Plated ..... " 1 00



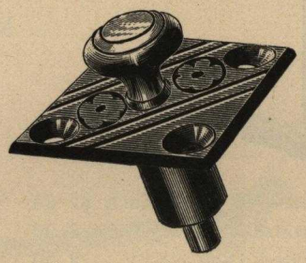
DOOR SASH BOLT.

No. 2 Bronze ..... Each, $1 00
2 Plated ..... " 1 00



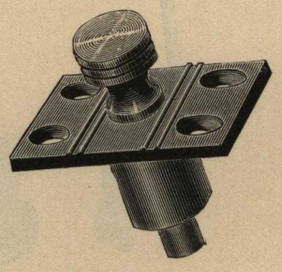
DOOR SASH BOLT.

No. 3 Bronze ..... Each, $1 00
3 Plated ..... " 1 00



DOOR SASH BOLT.

No. 4 Bronze ..... Each, $1 00
4 Plated ..... " 1 00



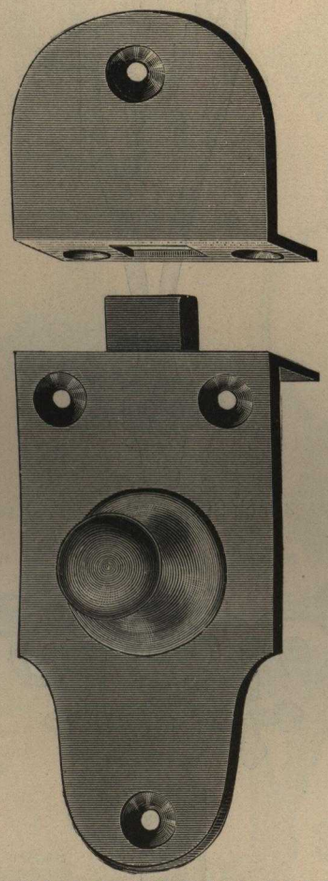
DOOR SASH BOLT.

No. 6 Bronze ..... Each, $1 00
6 Plated ..... " 1 00

BOLTS AND CATCHES.

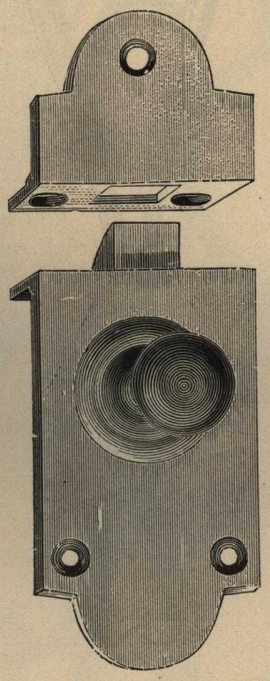
(FLUSH BOLTS.)

(Full Sizes.)



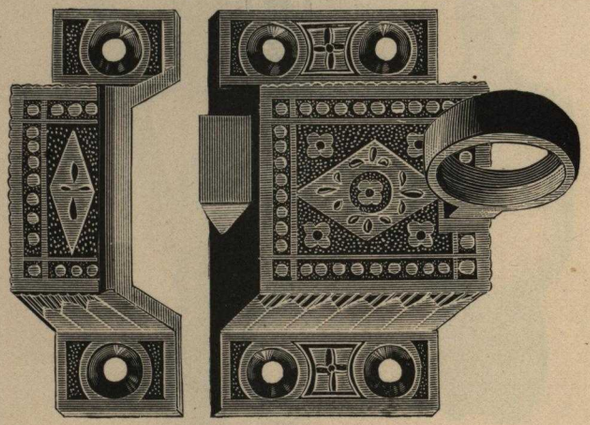
STATE ROOM DOOR BOLT.

No. 1	Brass	Each,	$0 70
1	Plated	"	90



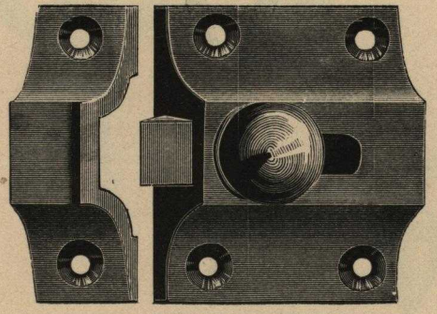
CUPBOARD CATCH.

No. 3	Brass	Each,	$0 68
" 3	Plated	"	90
" 3	Bronze	"	90



CUPBOARD CATCH.

No. 2	Bronze	Each,	$1 25
2	Plated	"	1 25

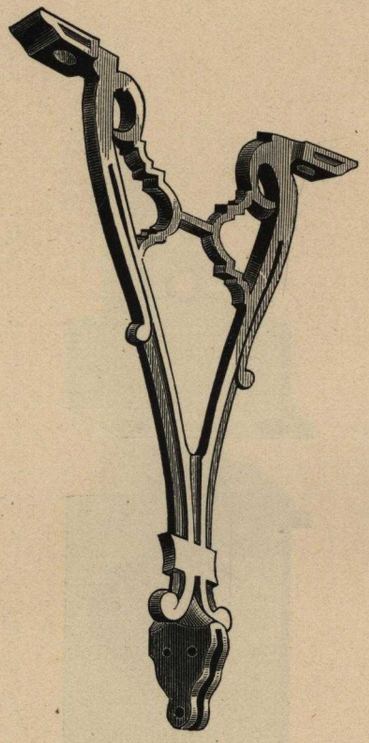


CUPBOARD CATCH.

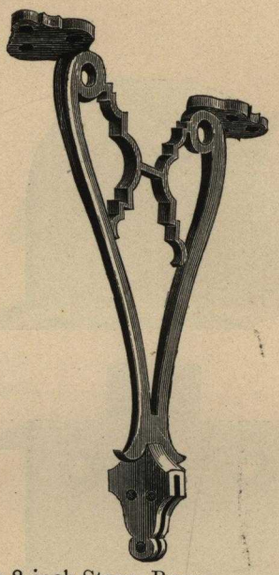
No. 4	Brass	Each,	$0 80
4	Plated	"	1 00

BELL CORD STRAP HANGERS.

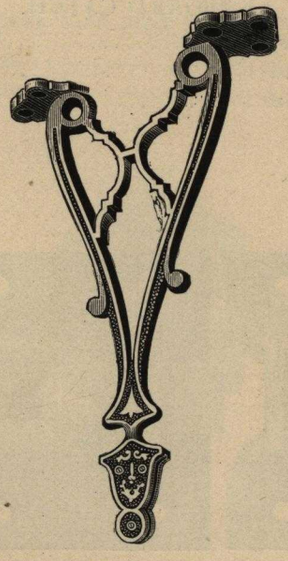
(Standard Sizes.)



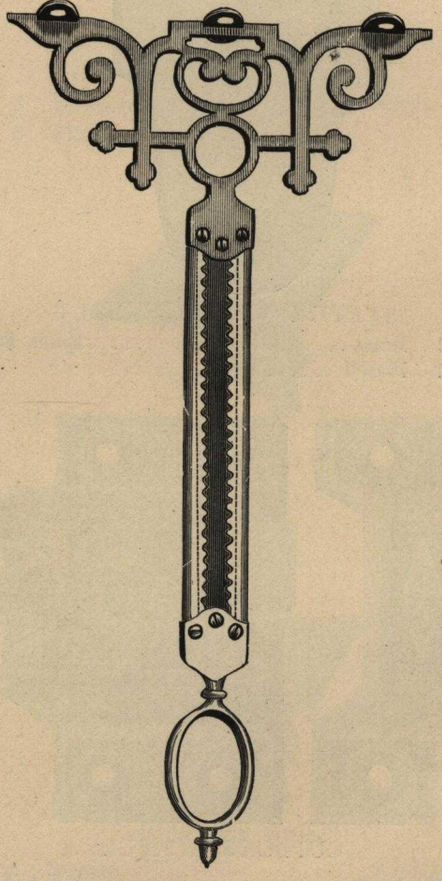
No. 3 With 8 inch Strap, Brass.. ...Each, $3 25
3 " 8 " " Plated..... " 4 00



No. 7 With 8 inch Strap, Brass.....Each, $3 00
7 " 8 " " Plated..... " 3 50
7 " 8 " " Bronze .... " 3 50



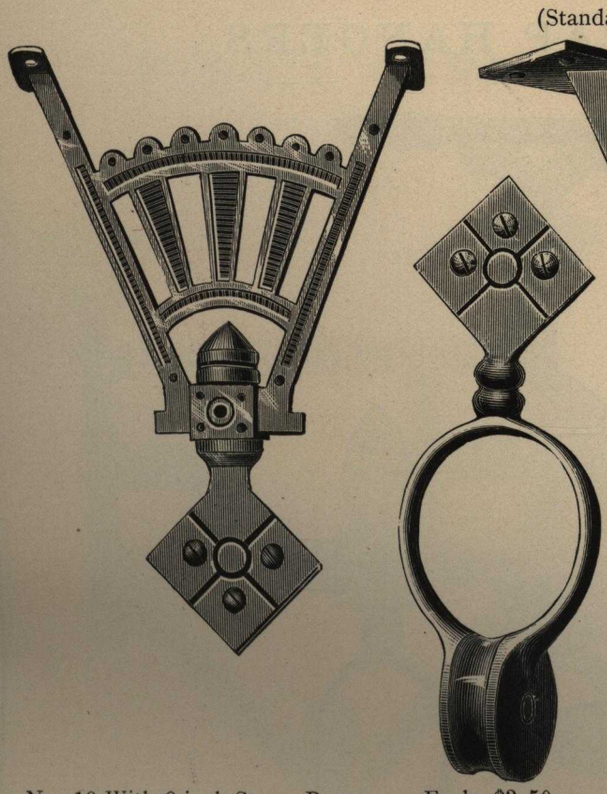
No. 9 With 8 inch Strap, Brass.....Each, $3 00
9 " 8 " " Bronze .... " 3 50
9 " 8 " " Plated..... " 3 50



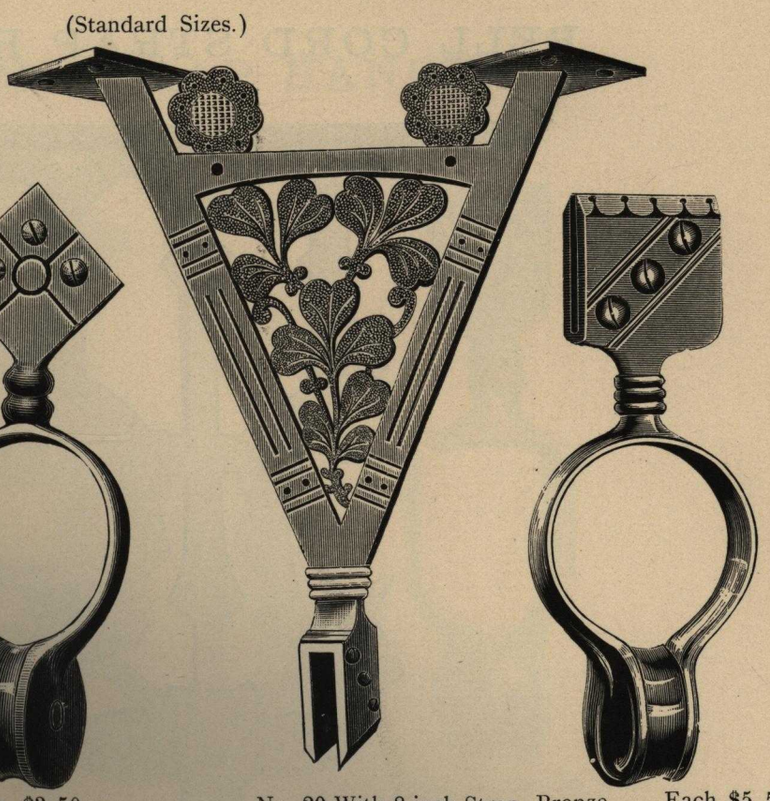
No. 61 With 8 inch Strap, Brass.....Each, $2 25
61 " 8 " " Plated.... " 3 00

BELL CORD STRAP HANGERS.

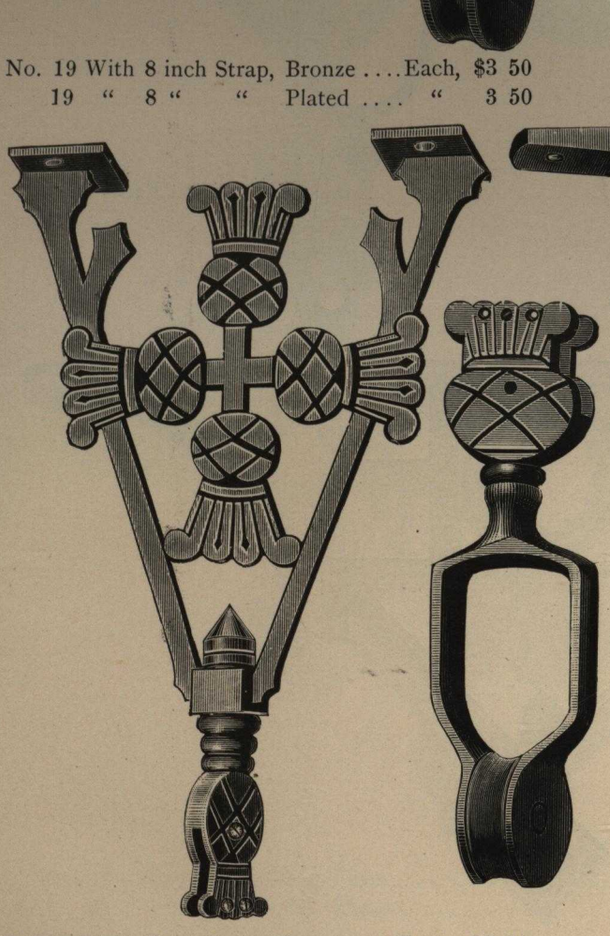
(Standard Sizes.)



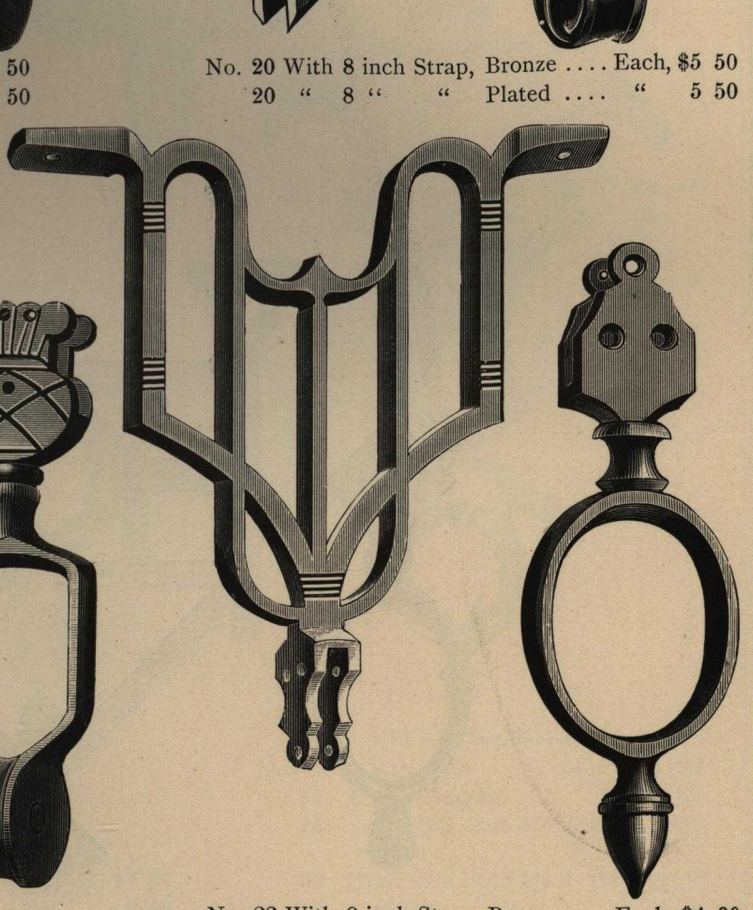
No. 19 With 8 inch Strap, Bronze ....Each, $3 50
19 " 8 " " Plated .... " 3 50



No. 20 With 8 inch Strap, Bronze .... Each, $5 50
20 " 8 " " Plated .... " 5 50



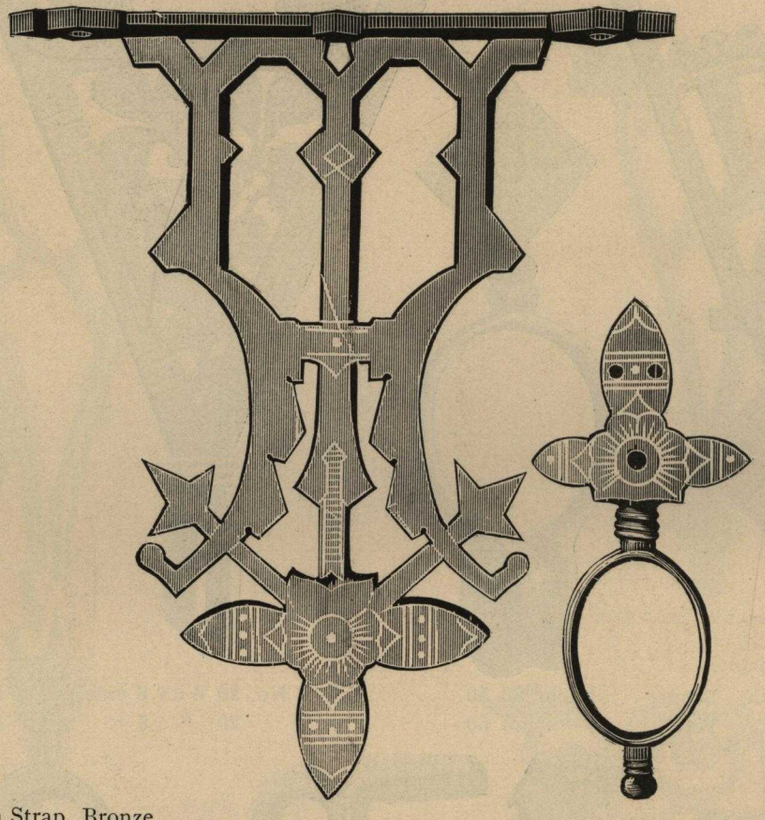
No. 21 With 8 inch Strap, Bronze....Each, $5 50
21 " 8 " " Plated..... " 5 50



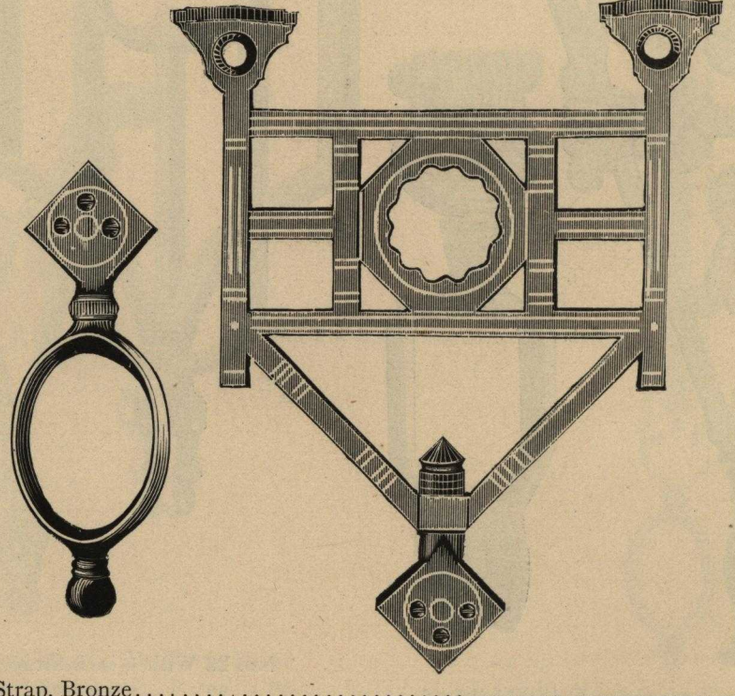
No. 22 With 8 inch Strap, Brass.....Each, $4 00
22 " 8 " " Bronze .... " 4 50
22 " 8 " " Plated .... " 4 50

BELL CORD STRAP HANGERS.

(Standard Sizes.)



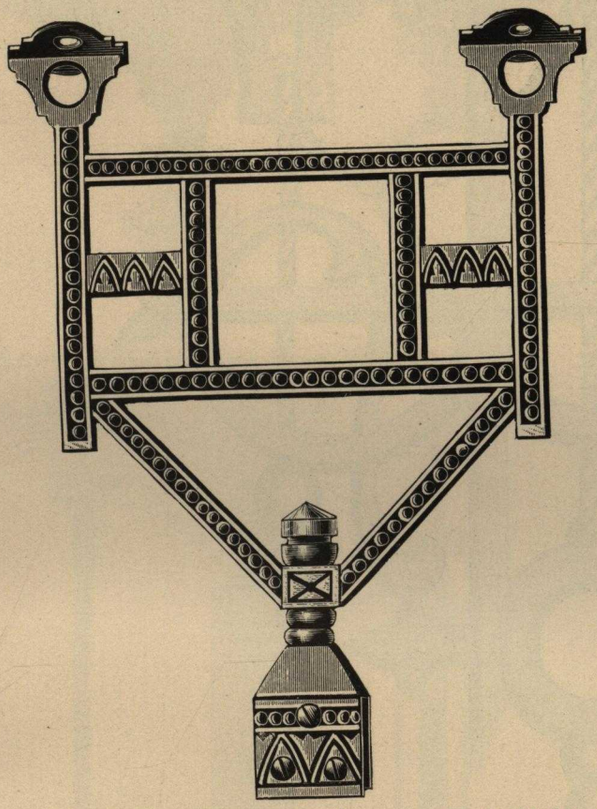
No. 80 With 8 inch Strap, Bronze ..... Each, $5 50
80 " 8 " " Plated ..... " 5 50



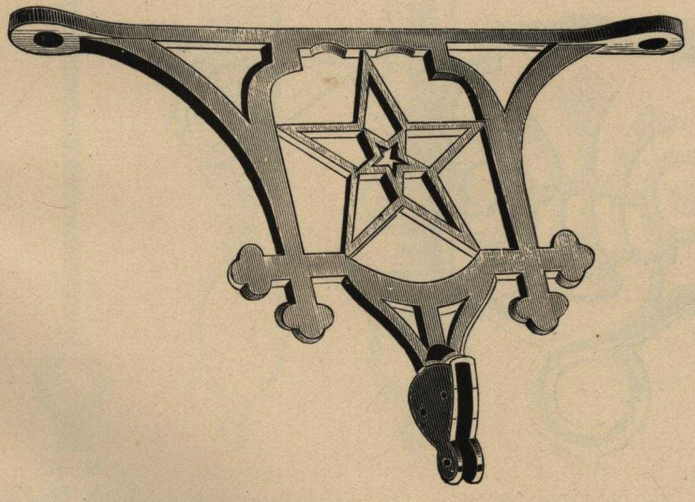
No. 81 With 8 inch Strap, Bronze ..... Each, $4 50
81 " 8 " " Plated ..... " 4 50

BELL CORD STRAP HANGERS.

(Standard Sizes.)

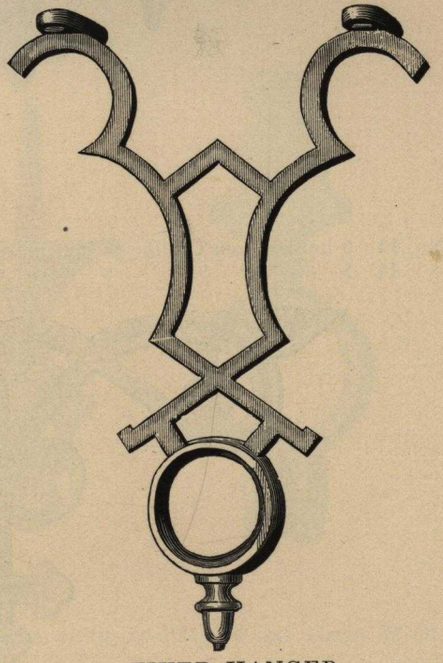


No. 95 With 8 inch Strap, Bronze...Each, $4 50
95 " 8 " " Plated.... " 4 50



No. 60 With 8 inch Strap, Brass.....Each, $3 50
60 " 8 " " Plated..... " 4 50

Ring for No. 95.

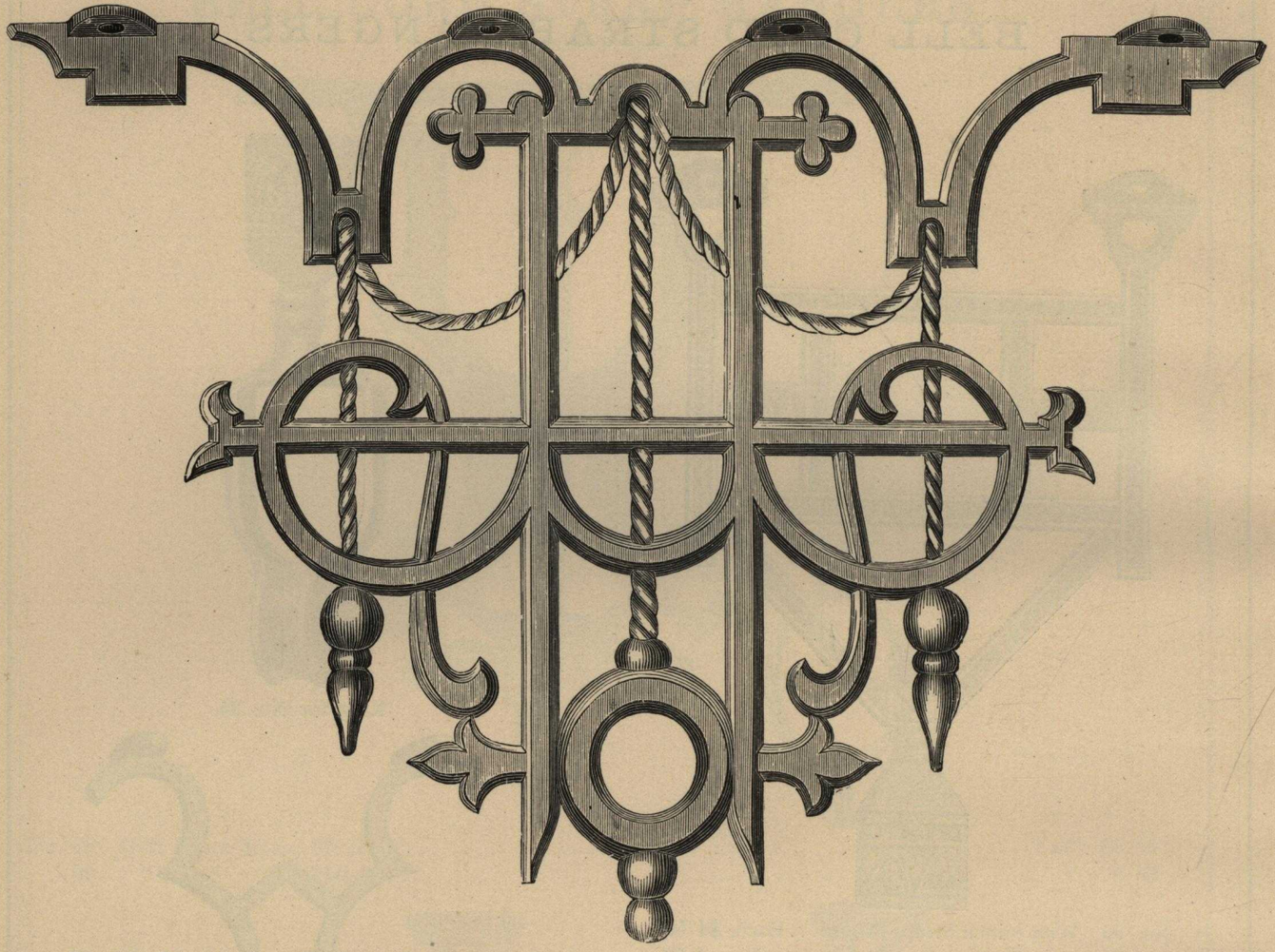


FIXED HANGER.

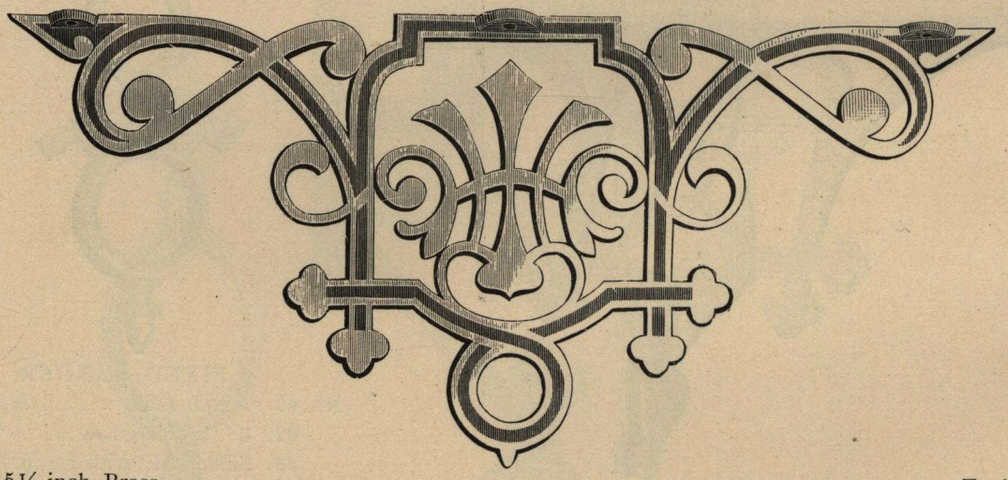
No. 62 6 inch Brass.....Each, $1 00
62 6 ' Plated..... " 1 25
38 Same style, with 4½ in. drop, same price.
39 Same style, with 5½ in. drop, same price.

BELL CORD FIXED HANGERS.

(Standard Sizes.)



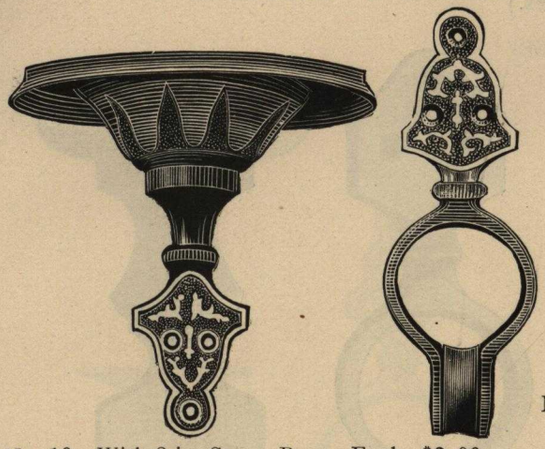
No. 44	9 inches from Carline to bottom of hole, Brass	Each,	$4 50
44	9 " " " " Plated	"	5 75



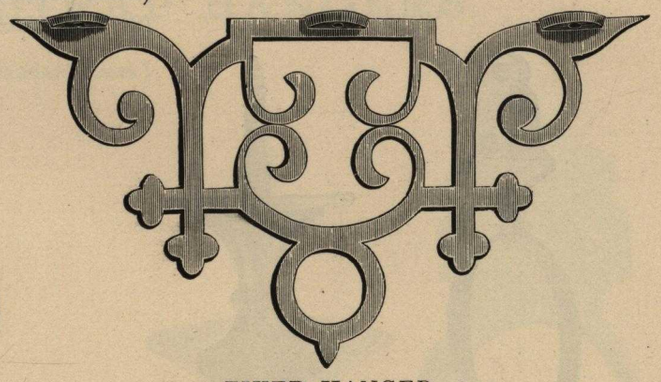
No. 46	5½ inch, Brass	Each,	$3 50
46	5½ " Plated	"	4 50
41	4½ " Brass, same pattern as No. 46	"	3 25
41	4½ " Plated, " " "	"	3 75
42	2½ " Brass, " " "	"	2 60
42	2½ " Plated, " " "	"	3 00

BELL CORD STRAP HANGERS.

(Standard Sizes.)



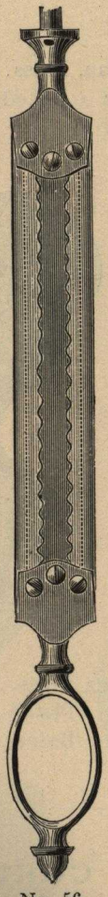
No. 10	With 8 in. Strap,	Brass..	Each,	$3 00
10	" 8 "	Plated.	"	3 50
10	" 8 "	Bronze.	"	3 50



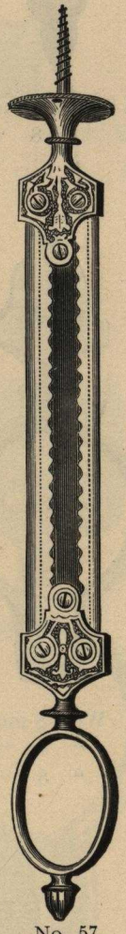
FIXED HANGER.

No. 47	4½ inch,	Brass.....	Each,	$2 75
47	4½ "	Plated.....	"	3 25
45	8½ "	Brass, same Pattern as No. 47..	"	5 25
45	8½ "	Plated " " " ..	"	6 75
6	4 "	Brass " " " ..	"	2 20
6	4 "	Plated " " " ..	"	2 50

No. 40.

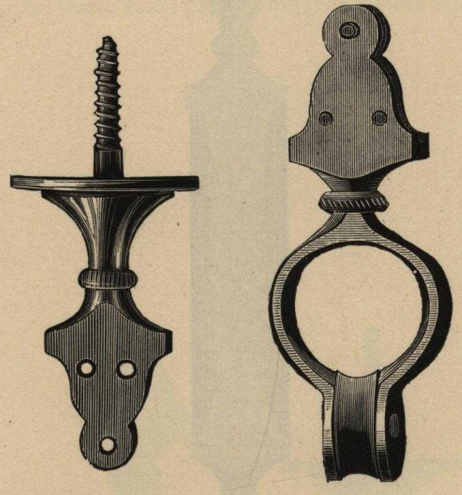


No. 56.



No. 57.

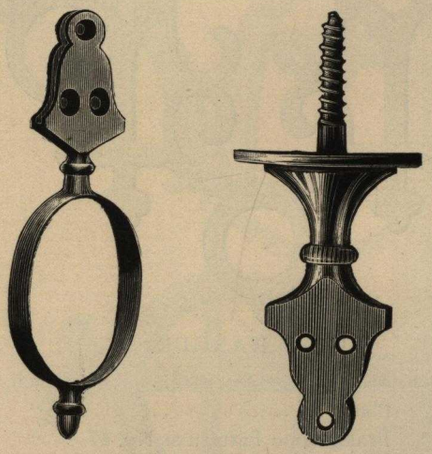
No. 40	With 16 inch	Tubing, Brass	Each,	$2 50
40	" 16 "	" Plated....	"	3 25
40	" 16 "	" Bronze ...	"	3 25
56	" 8 "	Strap, Brass	"	2 00
56	" 8 "	" Plated....	"	2 25
57	" 8 "	" Bronze ...	"	2 25



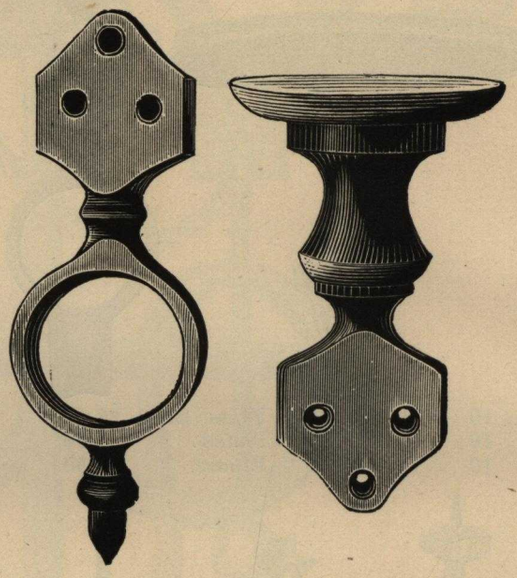
No. 58	With 8 in.	Strap and Ring, Brass..	Each,	$2 00
58	" 8 "	" Plated.	"	2 25

BELL CORD STRAP HANGERS.

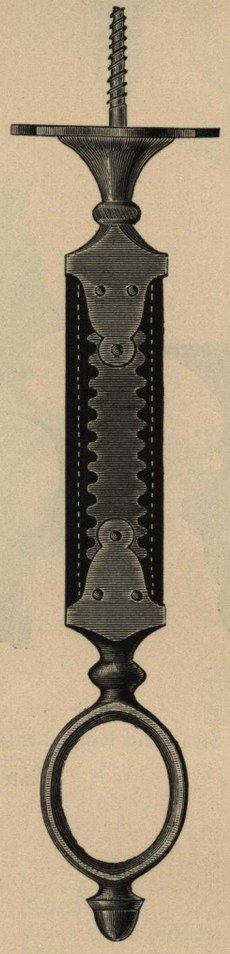
(Standard Sizes.)



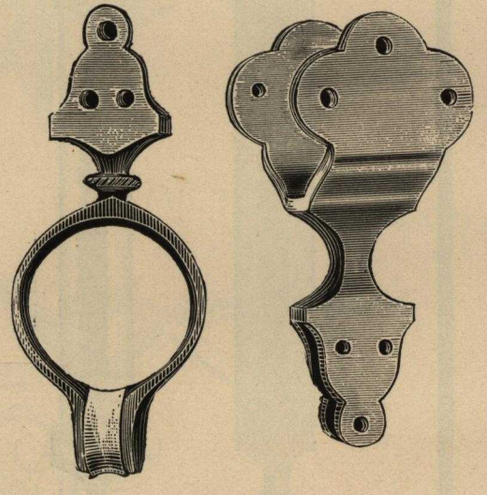
No. 63 With 8 inch Strap, Brass.....Each, $2 00
63 " 8 " " Plated..... " 2 25



No. 66 With 8 inch Strap, Brass.....Each, $2 15
66 " 8 " " Plated..... " 2 45



No. 64 With 8 inch Strap, Brass.....Each, $2 00
64 " 8 " " Plated..... " 2 25



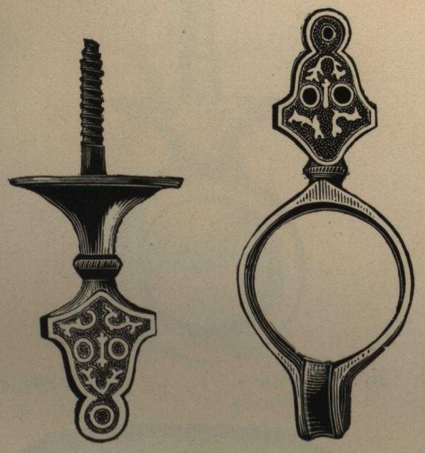
No. 68 With 8 inch Strap, Brass.....Each, $2 25
68 " 8 " " Plated..... " 2 50
68 " 8 " " Bronze..... " 2 50

BELL CORD.

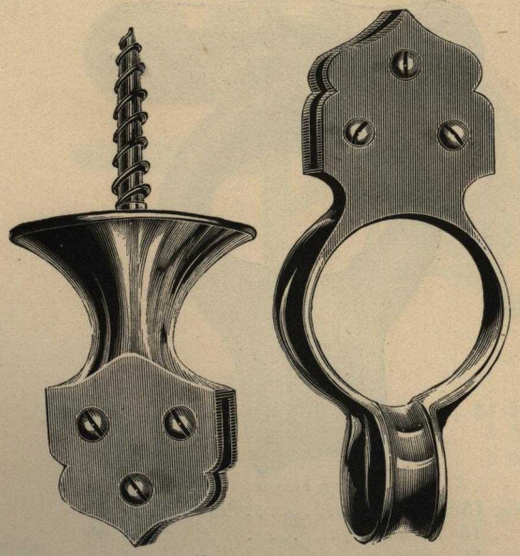
Hemp, best	Per lb.	$0 20
Hemp, plain	"	18
Leather	Per ft.	05
Strap, fancy Leather	"	48
Fancy Braided, best	"	03½

BELL CORD STRAP HANGERS.

(Standard Sizes.)

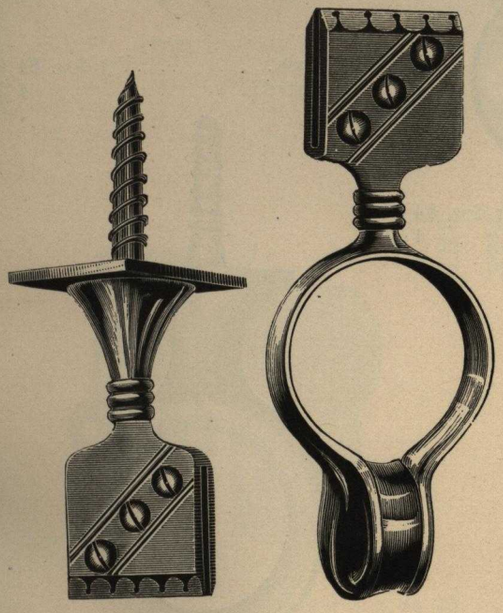


No. 72 With 8 inch Strap, Bronze ... Each, $2 25
72 " 8 " Plated .... " 2 25

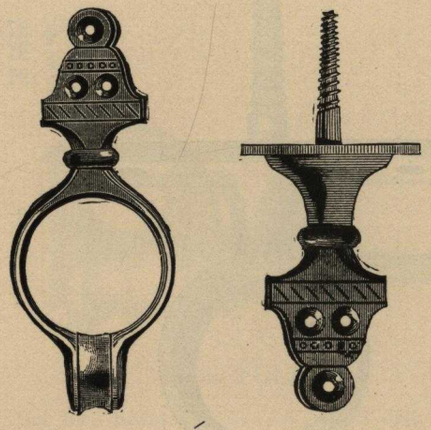


No. 76 With 8 inch Strap, Brass ..... Each, $2 00
76 " 8 " Plated .... " 2 25

We make same pattern in Queen Anne style.



No. 77 With 8 inch Strap, Bronze ... Each, $2 25
77 " 8 " Plated .... " 2 25

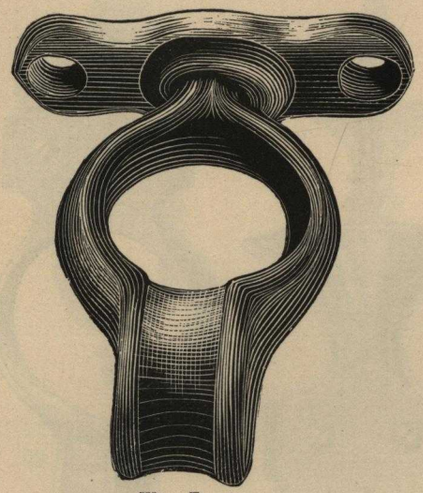


No. 82 With 8 inch Strap, Bronze ... Each, $2 25
82 " 8 " Plated .... " 2 25

BELL CORD HANGERS.

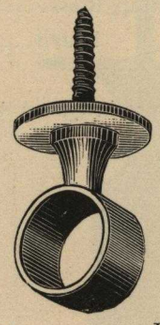
(BELL CORD GUIDES WITH SCREWS.)

(Standard Sizes.)

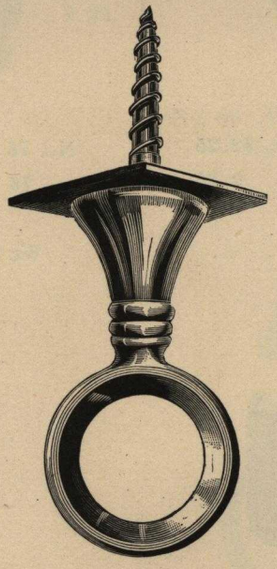


WITH FLANGE.

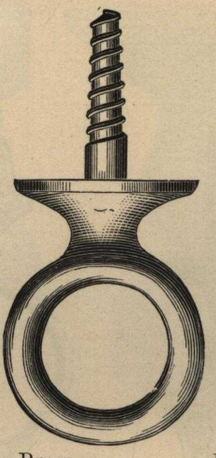
No. 15 Japanned.....Per doz. $3 00
15 Brass..... " 4 00
15 Plated..... " 4 50



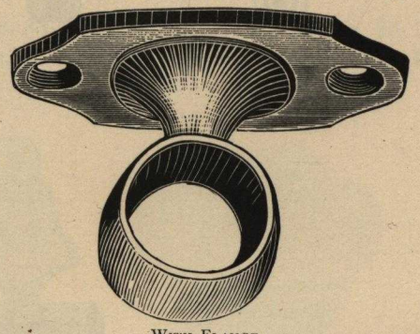
No. 70 Brass.....Per doz. $3 75
70 Plated..... " 4 25
70 Bronze..... " 4 25



No. 97 Brass.....Per doz. $4 00
97 Bronze..... " 4 50
97 Plated..... " 4 50

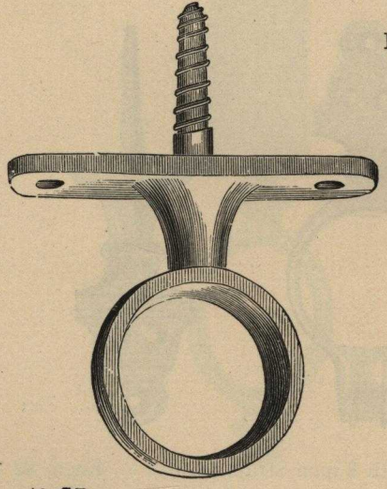


No. 48 Brass.....Per doz. $3 50
48 Plated..... " 4 00

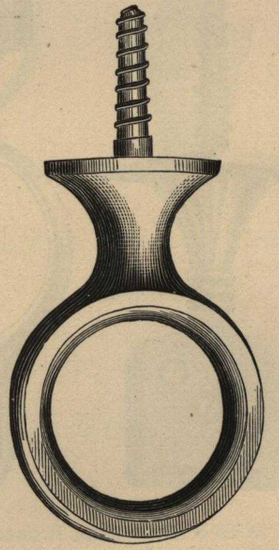


WITH FLANGE.

No. 78 Brass.....Per doz. $4 00
78 Plated..... " 4 50



No. 49 Brass.....Per doz. $4 00
49 Plated..... " 4 50

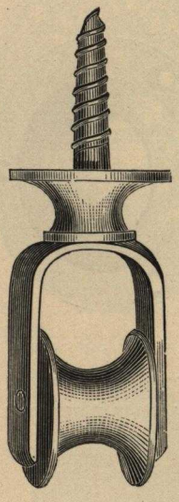


No. 50 Brass.....Per doz. $3 50
50 Plated..... " 4 00

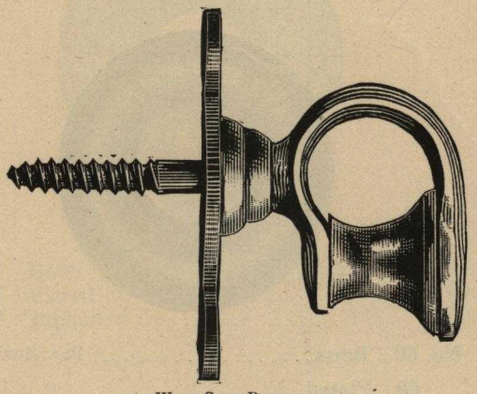
BELL CORD HANGERS.

(BELL CORD GUIDES WITH SCREWS.)

(Standard Sizes.)

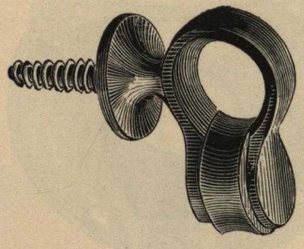


No. 53 Brass.....Per doz. $4 00
53 Plated..... " 4 50



WITH SIDE PULLEY.

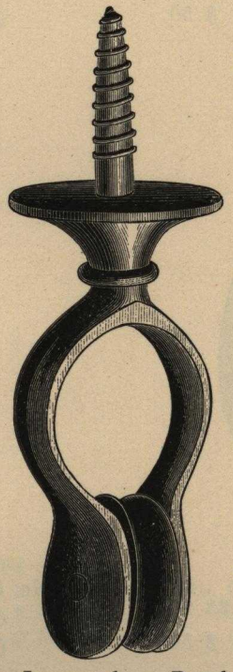
No. 84 Brass.....Per doz. $4 50
84 Plated..... " 5 50
84 Bronze..... " 5 50



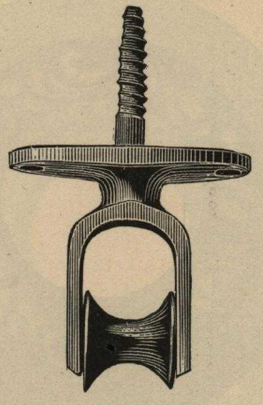
SIDE PULLEY.

WITH FLANGE AND SIDE PULLEY.

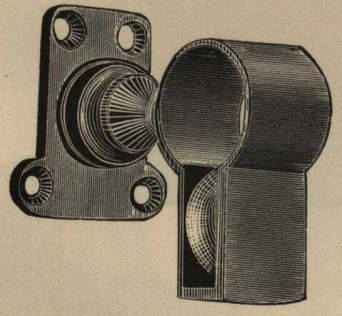
No. 54 Brass.....Per doz. $4 50
54 Plated..... " 5 50



No. 52 Japanned....Per doz. 2 75
52 Brass..... " 4 50
52 Plated..... " 5 75

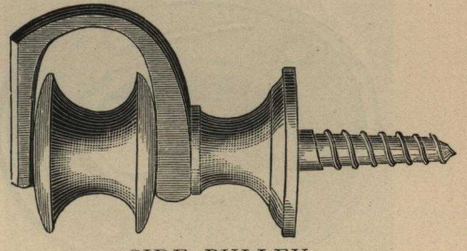


No. 83 Brass.....Per doz. $4 00
83 Plated..... " 4 50



WITH FLANGE AND SIDE PULLEY.

No. 74 Brass.....Per doz. $4 75
74 Plated..... " 5 75



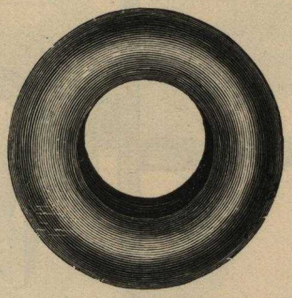
SIDE PULLEY.

No. 59 Brass.....Per doz. $4 50
59 Plated..... " 5 50

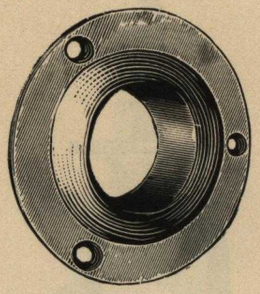
Special Patterns for Bell Cord Hangers made to order.

BELL CORD BUSHINGS.

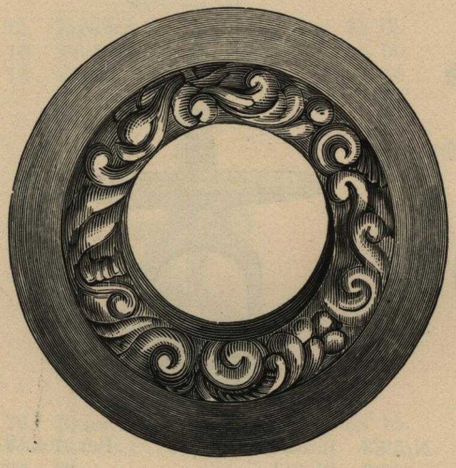
(Standard Sizes.)



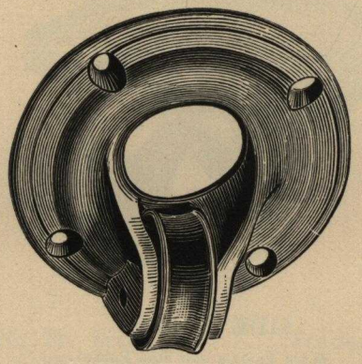
No. 60 Brass..... Per doz. $3 00
60 Plated..... " 3 50



No. 61 Brass..... Per doz. $3 00
61 Plated..... " 3 50
61 Japanned..... 1 75

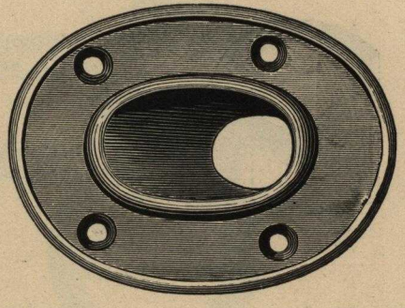


No. 62 Brass..... Per doz. $3 00
62 Plated..... " 3 50



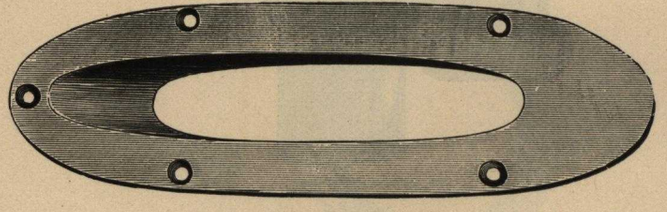
WITH PULLEY.

No. 63 Brass..... Per doz. $3 50
63 Plated..... " 4 00
63 Japanned..... " 2 50



BEVELED.

No. 64 Brass..... Per doz. $5 00
64 Plated..... " 6 00

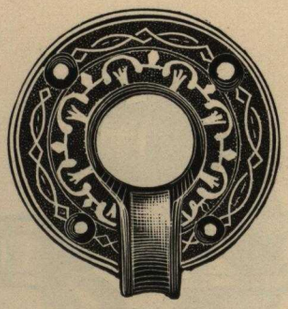


BEVELED.

No. 65 Brass..... Per doz. $5 00
65 Plated..... " 6 00

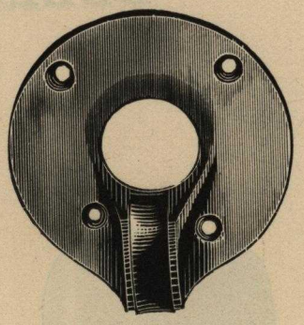
BELL CORD BUSHINGS.

(Standard Sizes.)



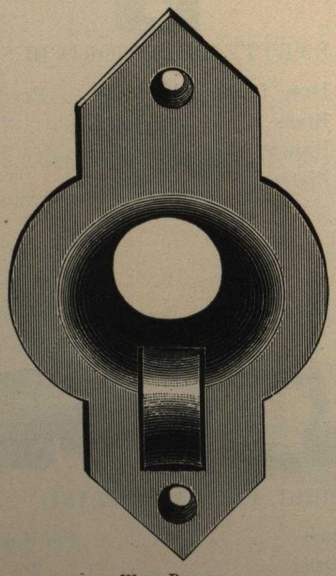
WITH PULLEY.

No. 66	Brass	Per doz.	$3 50
66	Bronze	"	4 00
66	Japanned	"	2 50



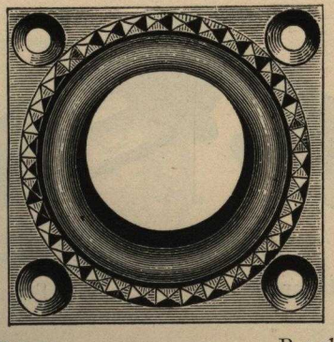
WITH PULLEY.

No. 67	Brass	Per doz.	$3 50
67	Plated	"	4 00
67	Japanned	"	2 50

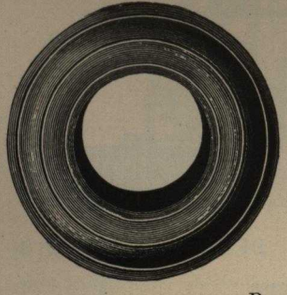


WITH PULLEY.

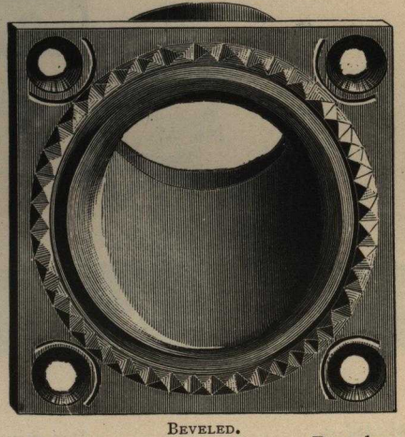
No. 68	Brass	Per doz.	$4 25
68	Plated	"	5 00
68	Bronze	"	5 00
68	Japanned	"	3 00



No. 69	Brass	Per doz.	$3 50
69	Plated	"	4 00
69	Bronze	"	4 00



No. 70	Brass	Per doz.	$3 00
70	Plated	"	3 50
70	Bronze	"	3 50

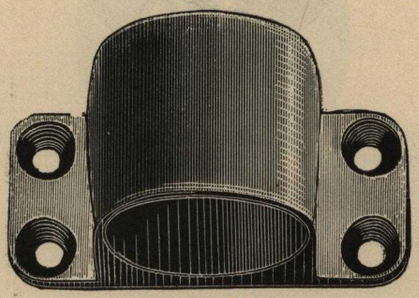


BEVELED.

No. 72	Brass	Per doz.	$5 00
72	Bronze	"	6 00
72	Plated	"	6 00

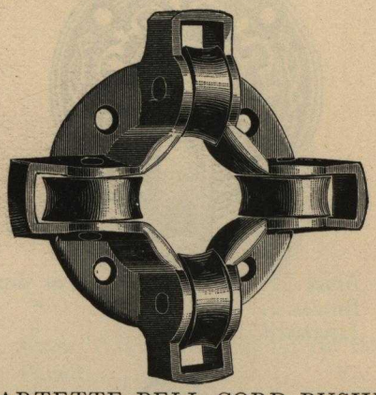
BELL CORD FIXTURES.

(Standard Sizes.)



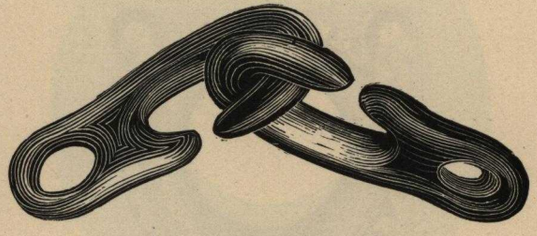
BELL CORD BUSHING.

No. 71	Brass	Per doz.	$4 00
71	Plated	"	4 75



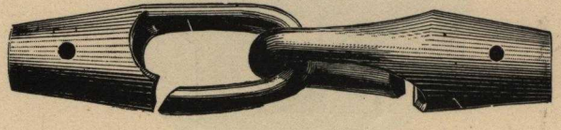
QUARTETTE BELL CORD BUSHING.

No. 73	Iron, Japanned	Per doz.	$ 5 00
73	Brass	"	7 00
73	Bronze	"	10 00
73	Plated	"	10 00



BELL CORD COUPLING.

No. 55	Japanned	Per doz.	$0 70



BELL CORD COUPLING.

No. 56	Brass	Per doz.	$1 75
56	Plated	"	2 00

BELL CORD COUPLING.

No. 57	Brass	Per doz.	$1 75
57	Plated	"	2 00

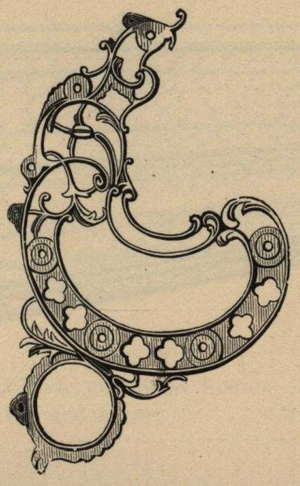
BELL CORD COUPLING.

No. 58	Brass	Per doz.	$2 00
58	Plated	"	2 50

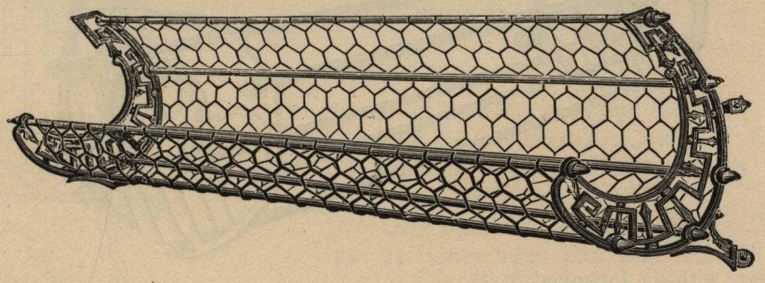
BELL CORD SPLICE.

No. 59	Brass	Per doz.	$2 00
59	Plated	"	2 50

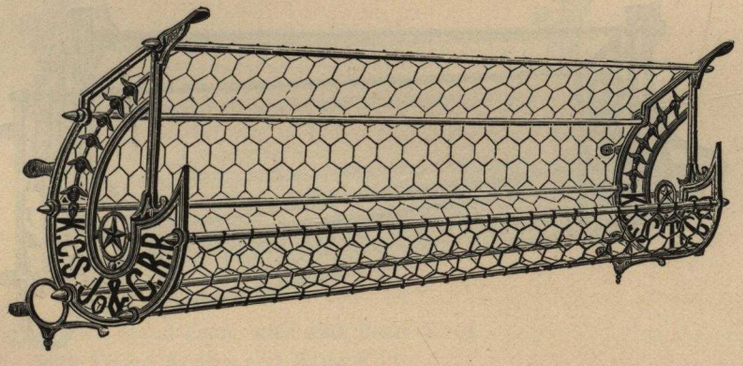
BASKET RACKS.



No. 3 24 inches long, with Basket ..... Each, $4 00
Over 24 inches long, extra ..... Per in. 08

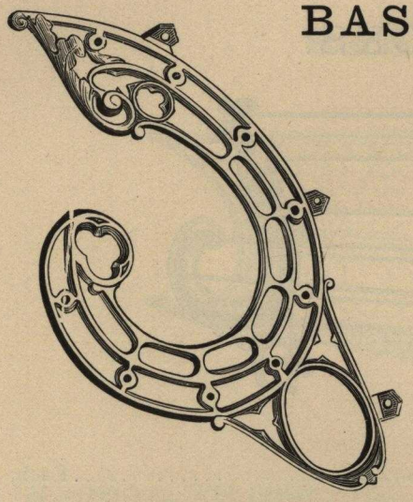


No. 4 24 inches long, Wire Basket ..... Each, $4 50
Over 24 inches long, extra ..... Per in. 08



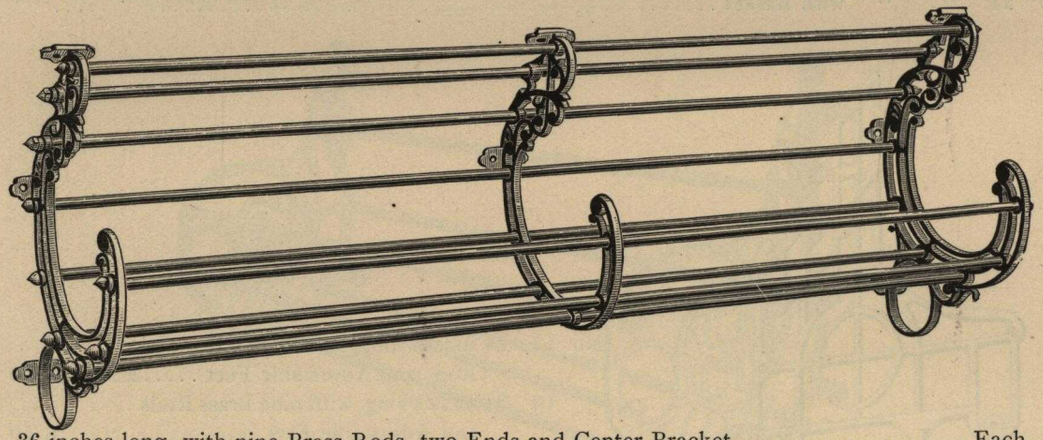
No. 5 24 inches long, Wire Basket ..... Each, $4 50
Over 24 inches long, extra ..... Per in. 08

BASKET RACKS.

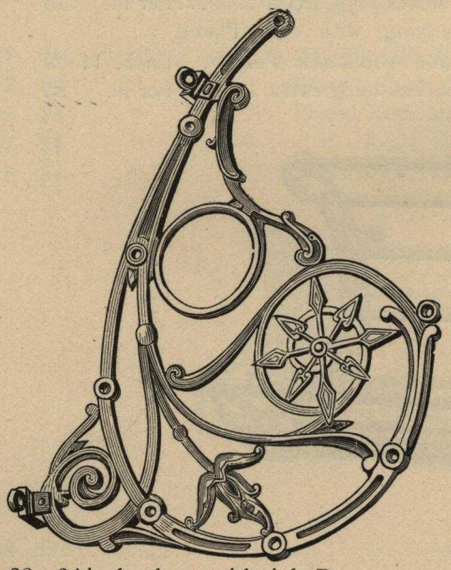


No. 18 End View of Bracket.

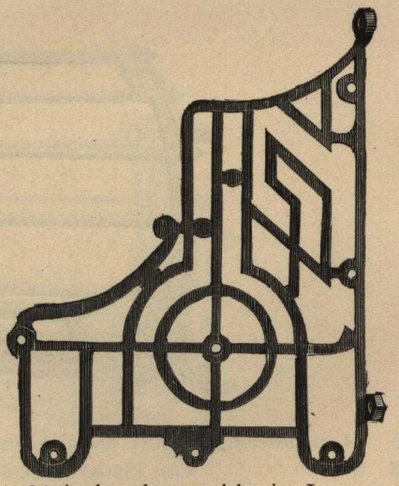
No. 18 24 inches long, with nine Brass Rods.....Each, $6 50
Over 24 inches long, extra...Per in. 15
18 24 inches long, with nine Japanned Rods.....Each, 4 50
Over 24 inches long, extra...Per in. 08



No. 21 36 inches long, with nine Brass Rods, two Ends and Center Bracket.....Each, $10 25

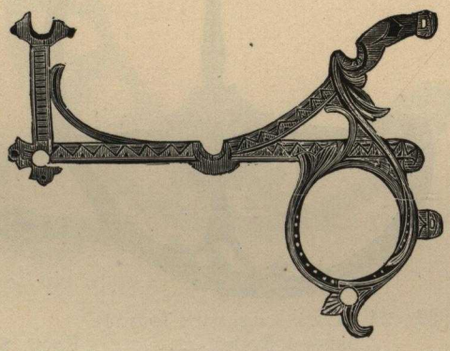


No. 22 24 inches long, with eight Brass Rods.....Each, $8 00
Over 24 inches long, extra...Per in. 15
22 24 inches long, with eight Japanned Rods.....Each, 5 00

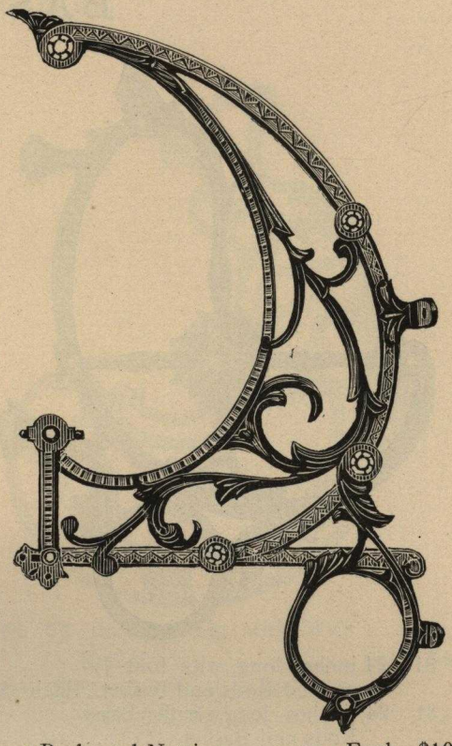


No. 24 24 inches long, with six Japanned Rods.....Each, $4 50
24 24 inches long, with six Brass Rods..... " 6 00

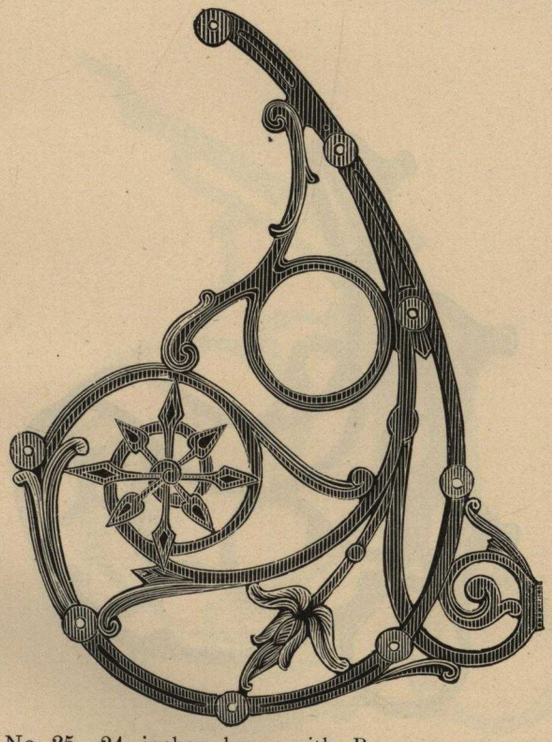
BASKET RACKS.



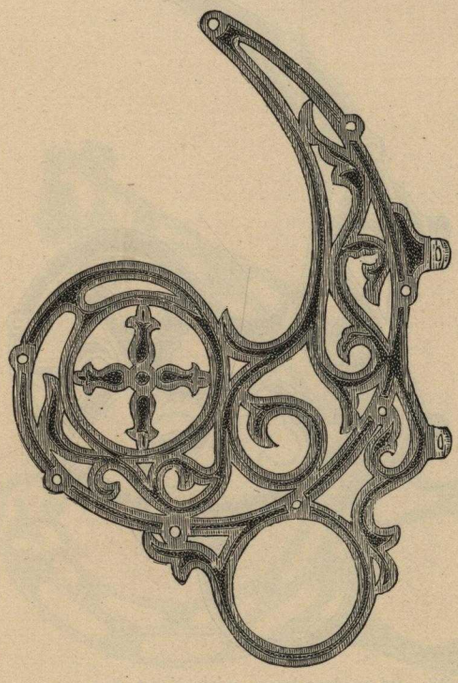
CENTER BRACKET.



No. 23 36 inches long, with two Ends and Center Bracket, six Brass Rods and Netting.....Each, $10 25
23 36 " " with two Ends and Center Bracket, six Japanned Rods and Netting ..... " 6 50

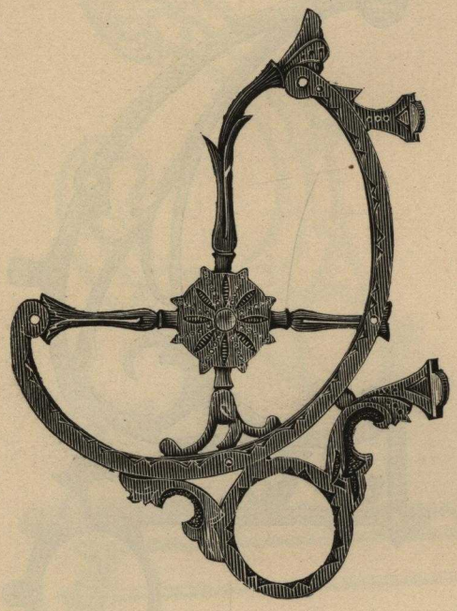


No. 25 24 inches long, with Brass Rods .....Each, $8 00
Over 24 inches long, extra ..Per in. 15
25 24 inches long, with nine Japanned Rods .....Each, 5 00

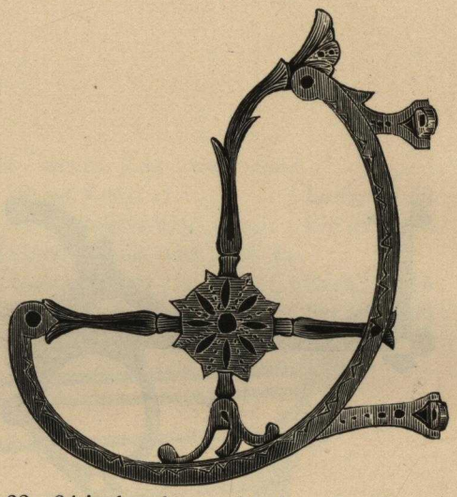


No. 30 24 inches long, with eight Japanned Rods .....Each, $4 50
30 24 inches long, with eight Brass Rods ..... " 7 25

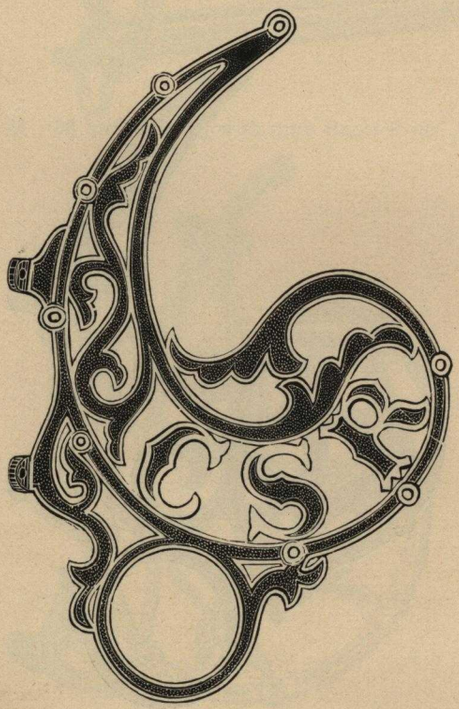
BASKET RACKS.



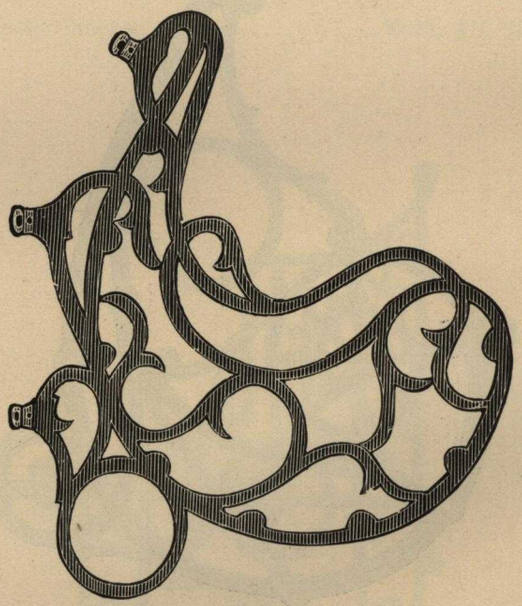
No. 31 24 inches long, with four Japanned Rods and Basket..Each, $4 50
31 24 inches long, with Brass Rods and Basket ..... " 6 50



No. 32 24 inches long, with four Japanned Rods .....Each, $4 50
32 24 inches long, with Brass Rods and Basket ..... " 6 50

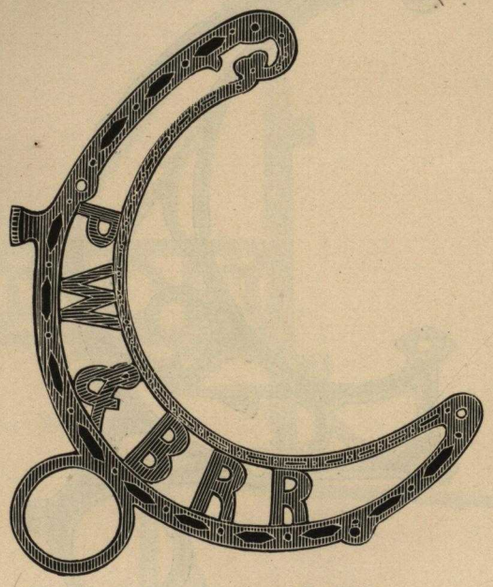


No. 33 24 inches long, with eight Japanned Rods.....Each, $4 50
33 24 inches long, with eight Brass Rods ..... " 7 25

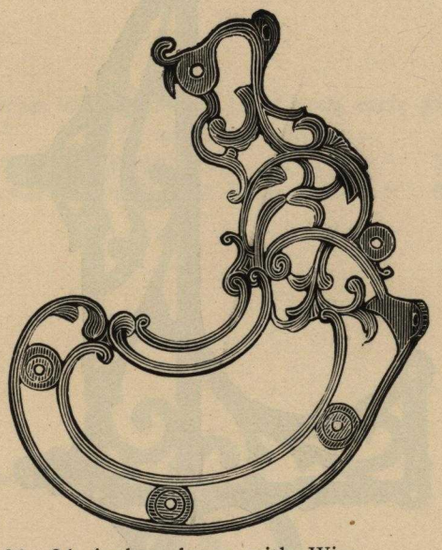


No. 34 24 inches long, with nine Japanned Rods.....Each, $4 50
34 24 inches long, with nine Brass Rods..... " 7 25

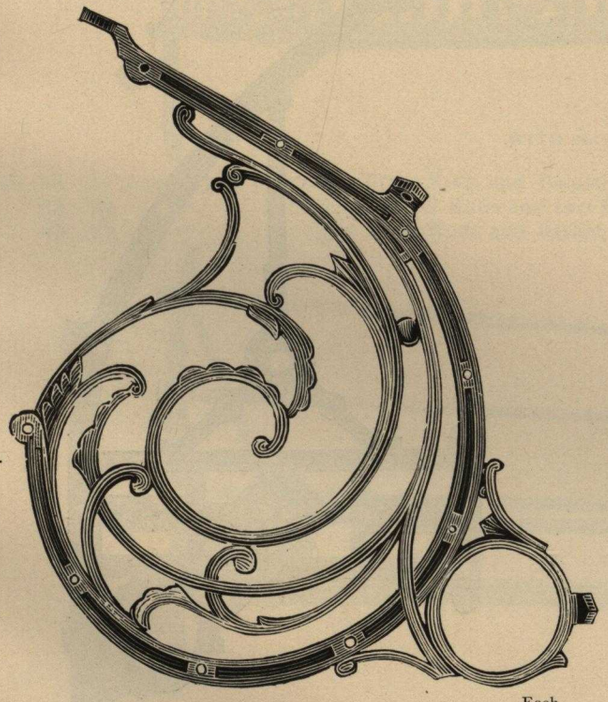
BASKET RACKS.



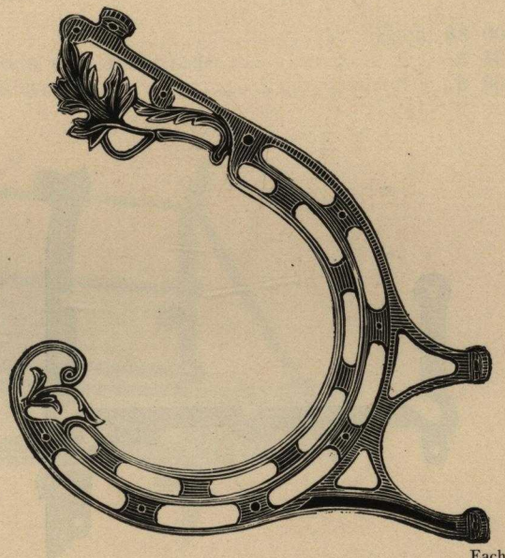
No. 35 24 inches long, with Wire Basket ..... Each, $4 50
35 24 inches long, with five Brass Rods and Basket ..... " 7 00



No. 36 24 inches long, with Wire Basket ..... Each, $4 50
36 24 inches long, with five Brass Rods and Basket ..... " 6 50

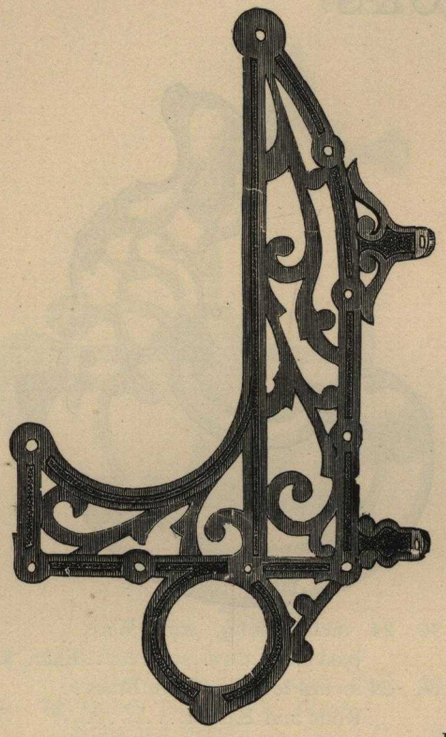


Each.
No. 37 24 inches long, with nine Jap'd Rods. $4 50
37 24 " " Brass Rods. 7 25

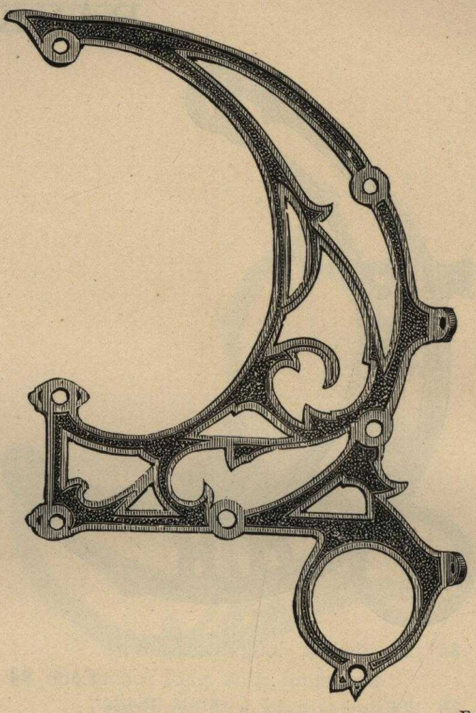


Each.
No. 38 24 inches long, with nine Jap'd Rods. $4 50
38 24 " " Brass Rods. 7 00

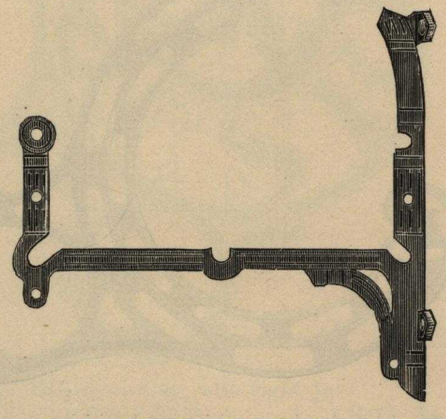
BASKET RACKS.



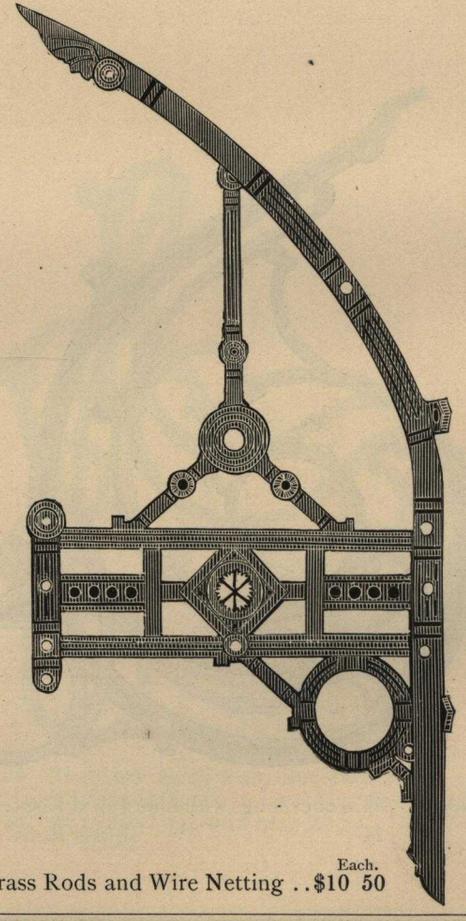
			Each.
No. 39	24 inches long, with nine Jap'd Rods.		$4 50
39	24 " "	Brass Rods.	7 00



			Each.
No. 40	24 inches long, with six Jap'd Rods.		$4 50
40	24 " "	Brass Rods.	6 50

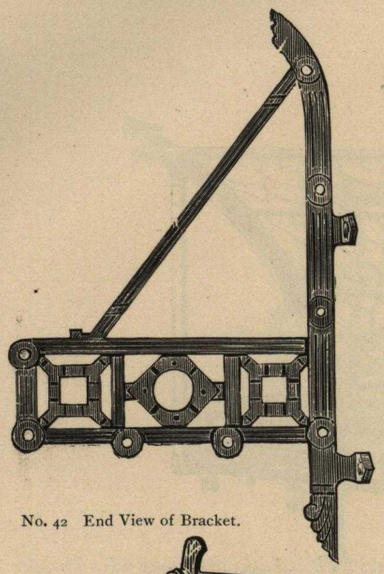


CENTER BRACKET.



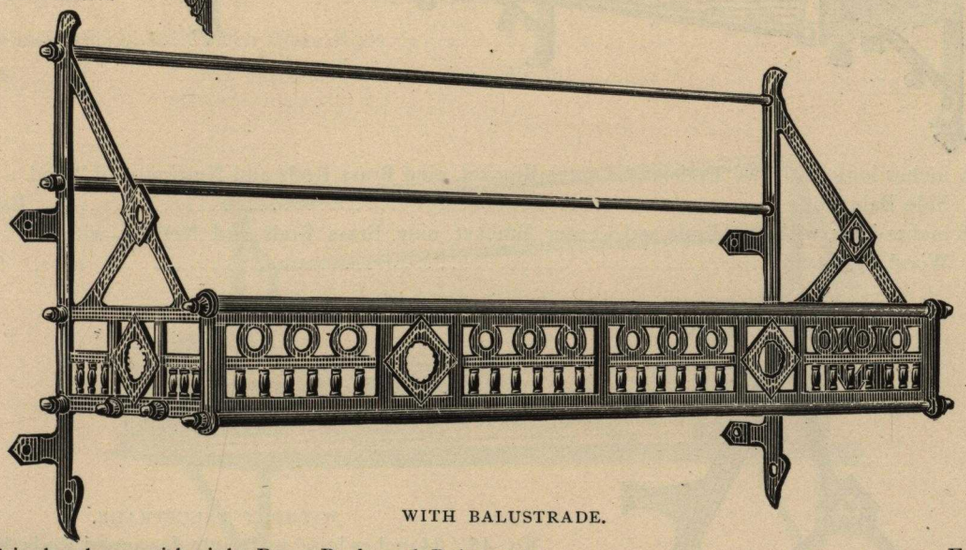
		Each.
No. 41	36 inches long, with two Ends and Center Bracket, nine Brass Rods and Wire Netting ..	$10 50

BASKET RACKS.



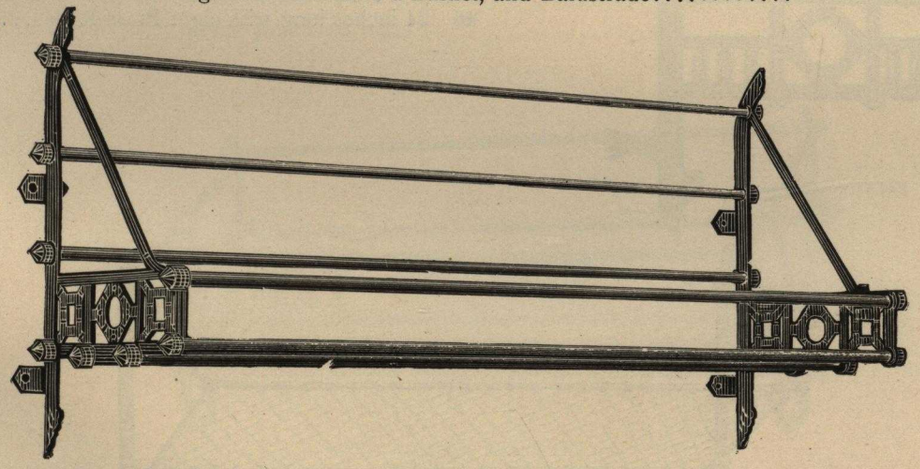
No. 42 End View of Bracket.

No. 42 24 inches long, with eight Jap'd Rods, each, $4 50
42 24 " " " two Brass and six Japanned Rods..... " 5 25
42 24 inches long, with eight Brass Rods, " 6 50



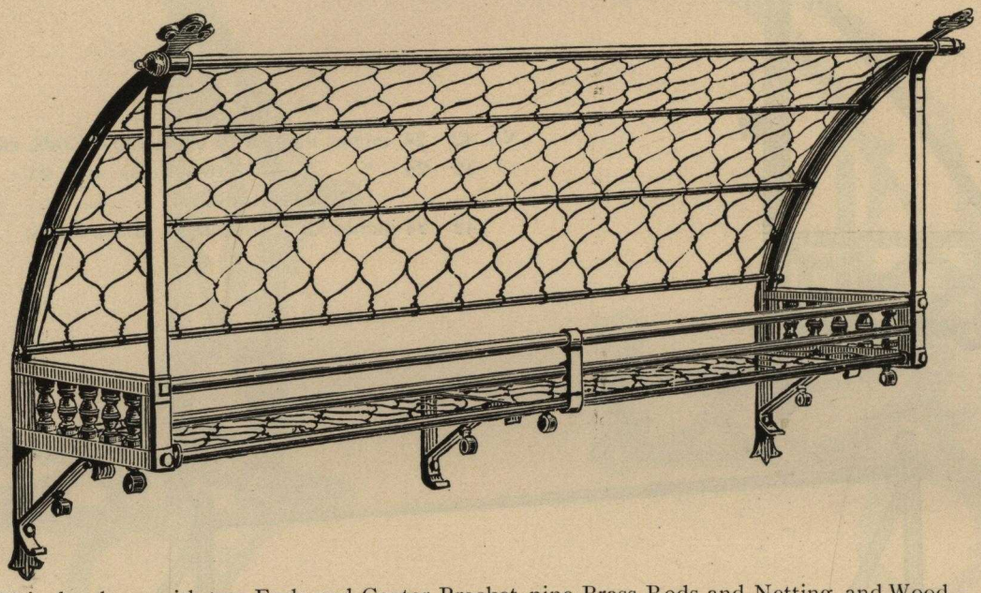
WITH BALUSTRADE.

No. 43 24 inches long, with eight Brass Rods and Balustrade ..... Each, $8 00
43 24 " " six Japanned Rods and two Brass Rods, with Balustrade..... " 6 50
43 24 " " eight Brass Rods and Basket, and Balustrade..... " 8 50



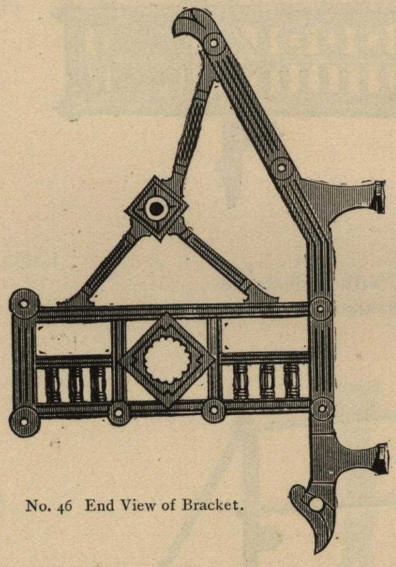
No. 44 24 inches long, with eight Brass Rods ..... Each, $6 50
44 24 " " six " and two Japanned Rods..... " 5 25
44 24 " " eight Japanned Rods..... " 4 50
44 24 " " eight Brass Rods and Wire Basket ..... " 7 00

BASKET RACKS.



No. 45 36 inches long, with two Ends and Center Bracket, nine Brass Rods and Netting, and Wood Side Balustrade ..... Each, $15 00

45 36 inches long, with two Ends and Center Bracket, nine Brass Rods and Netting, without Wood Balustrade ..... " 14 00



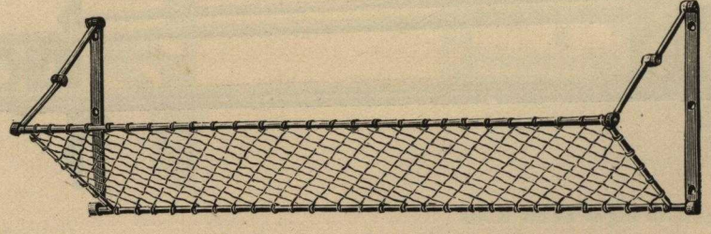
No. 46 End View of Bracket.

WITHOUT BALUSTRADE.

No. 46 24 inches long, with eight Japanned Rods, Each, $4 50

46 24 inches long, with two Brass and six Japanned Rods ..... " 5 25

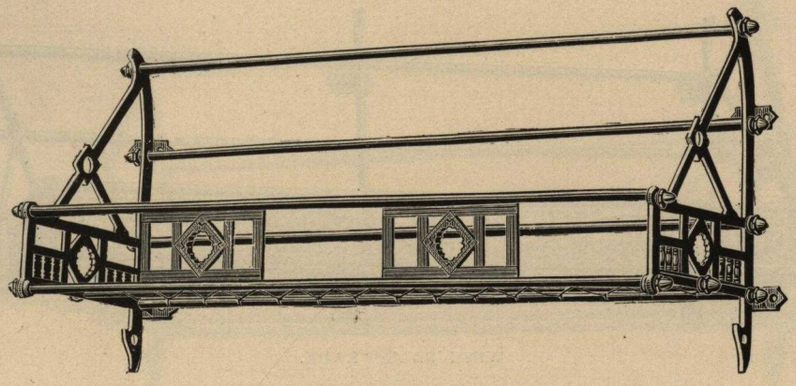
46 24 inches long, with eight Brass Rods .... " 6 50



Size, 24 x 6 inches.

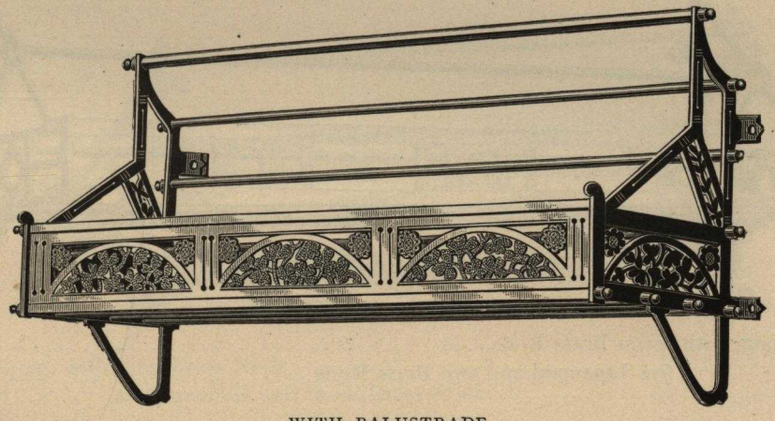
No. 68 Folding Basket Rack, Brass Ends and Brass Wire Netting ..... Each, $2 75

BASKET RACKS.



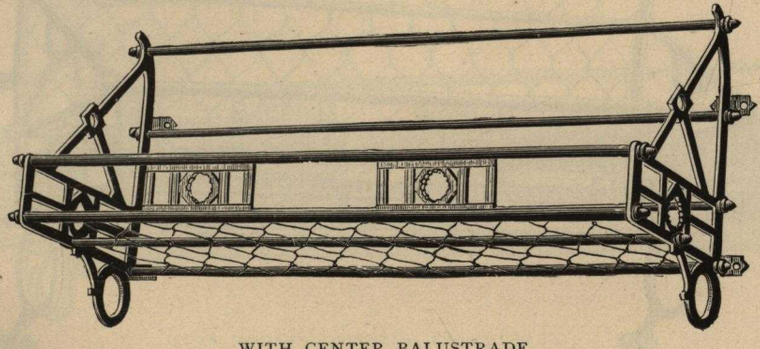
WITH CENTER BALUSTRADE.

No. 47 24 inches long, with seven Brass Rods ..... Each, $6 50
47 24 " " five Japanned and two Brass Rods ..... " 5 50



WITH BALUSTRADE.

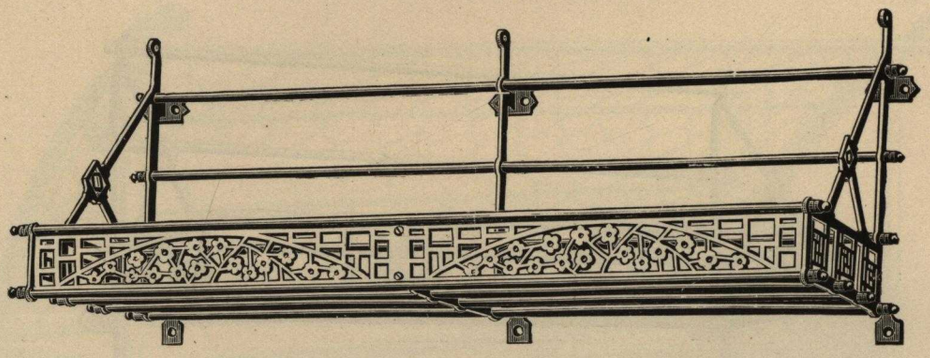
No. 48 24 inches long, with seven Brass Rods ..... Each, $9 00
48 24 " " seven Japanned Rods ..... " 7 50



WITH CENTER BALUSTRADE.

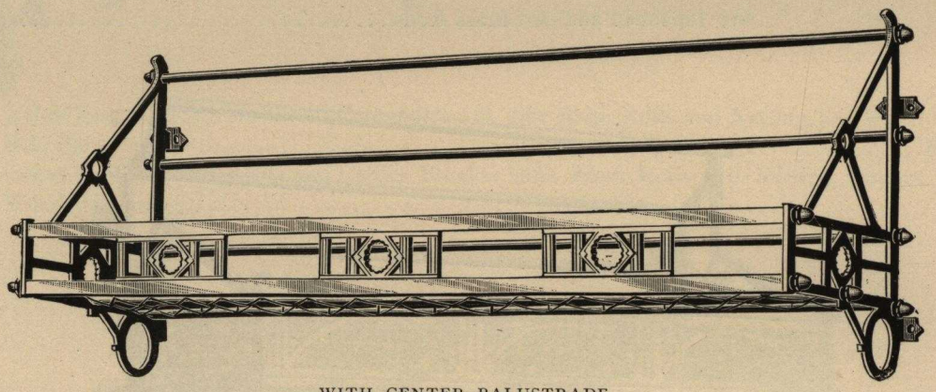
No. 49 24 inches long, with seven Brass Rods ..... Each, $6 00
49 24 " " five Japanned and two Brass Rods ..... " 5 00

BASKET RACKS.



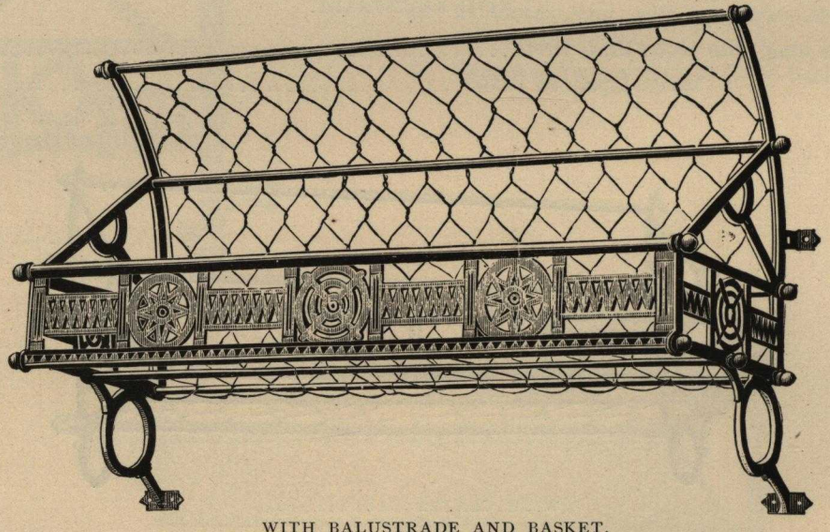
WITH BALUSTRADE.

No. 50 24 inches long, with eight Brass Rods.....Each, $9 00
50 24 " " six Japanned and two Brass Rods..... " 7 50



WITH CENTER BALUSTRADE

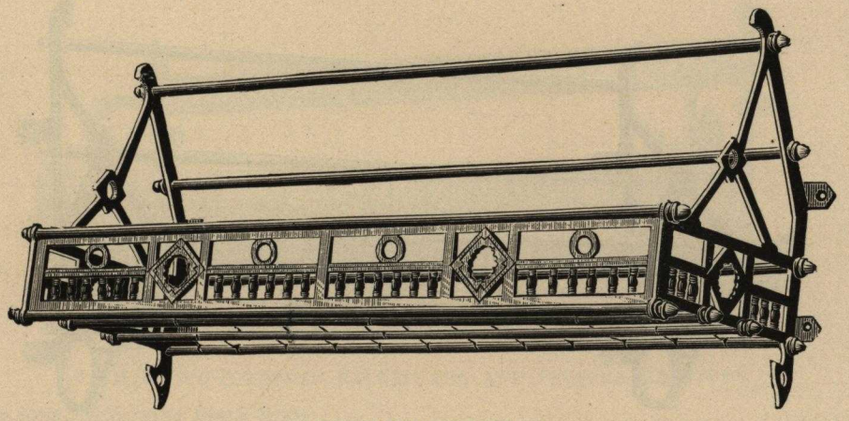
No. 51 24 inches long, with seven Brass Rods.....Each, $6 75
51 24 " " five Japanned and two Brass Rods..... " 5 75



WITH BALUSTRADE AND BASKET.

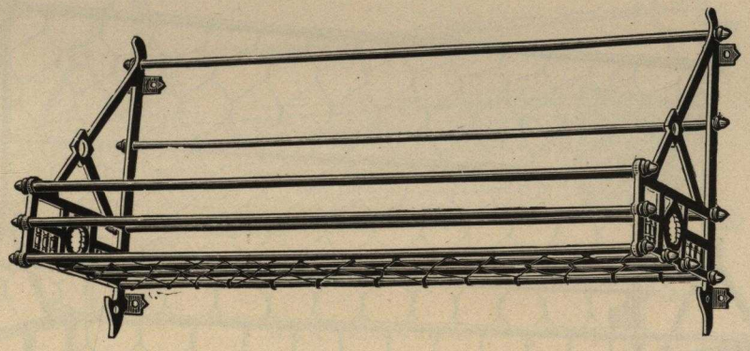
No. 52 24 inches long, with seven Brass Rods.....Each, $8 00
52 24 " " five Japanned and two Brass Rods..... " 6 50

BRACKET RACKS.

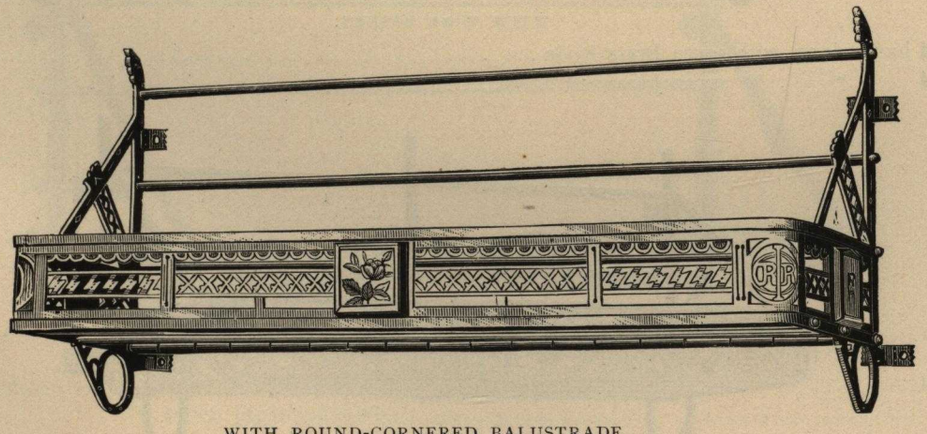


WITH BALUSTRADE.

No. 53 24 inches long, with eight Brass Rods ..... Each, $8 00
53 24 " " six Japanned and two Brass Rods ..... " 6 50



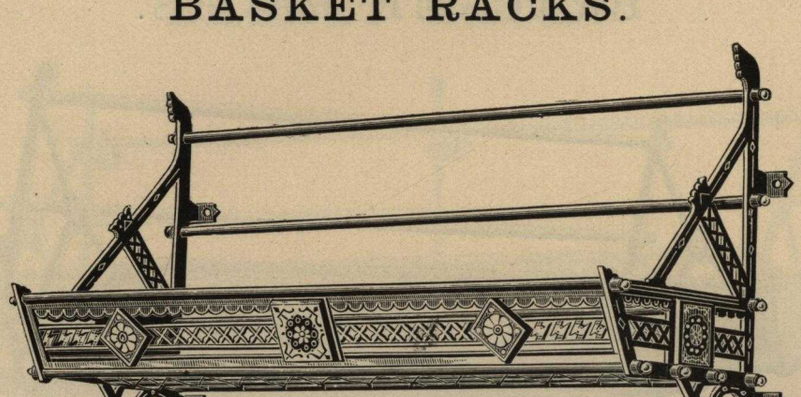
No. 54 24 inches long, with nine Brass Rods ..... Each, $6 75
54 24 " " six Japanned and three Brass Rods ..... " 5 50
54 24 " " nine Japanned Rods ..... " 4 50



WITH ROUND-CORNERED BALUSTRADE.

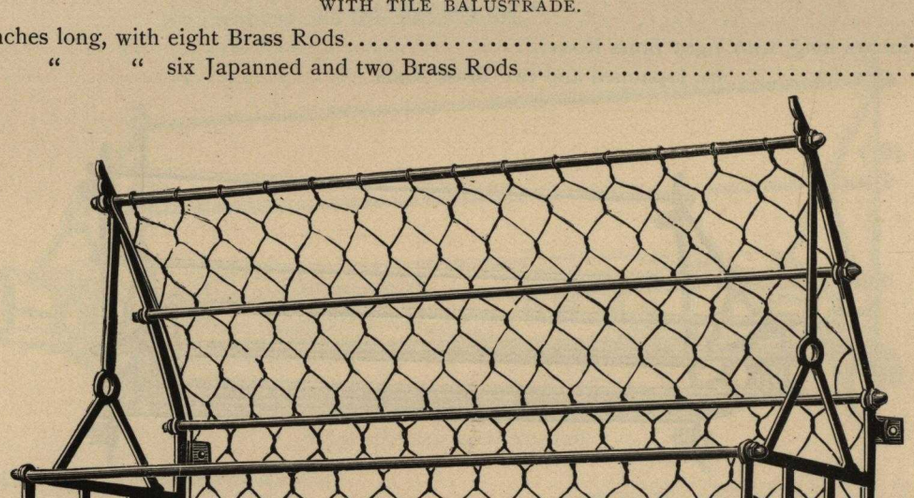
No. 57 24 inches long, with six Brass Rods ..... Each, $10 00
57 24 " " six Japanned Rods ..... " 8 50

BASKET RACKS.



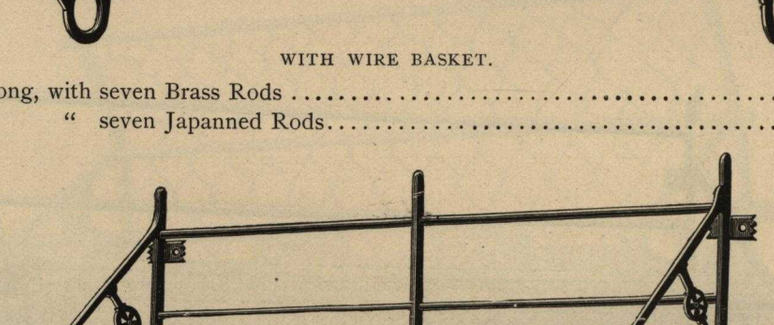
WITH TILE BALUSTRADE.

No. 58 24 inches long, with eight Brass Rods.....Each, $9 50
58 24 " " six Japanned and two Brass Rods..... " 8 00



WITH WIRE BASKET.

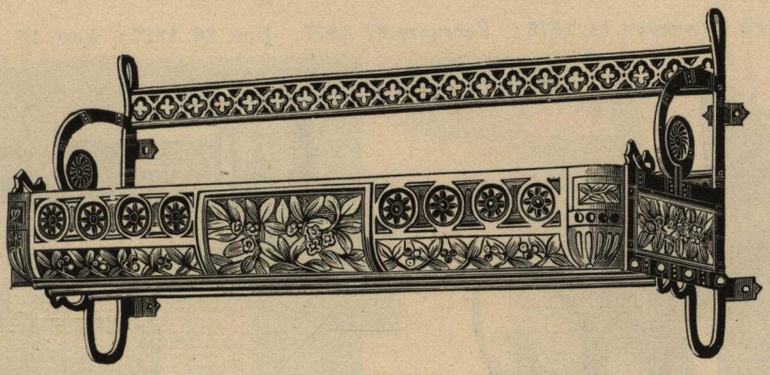
No. 59 24 inches long, with seven Brass Rods.....Each, $6 50
59 24 " " seven Japanned Rods..... " 4 50



WITH ROUND-CORNERED BALUSTRADE.

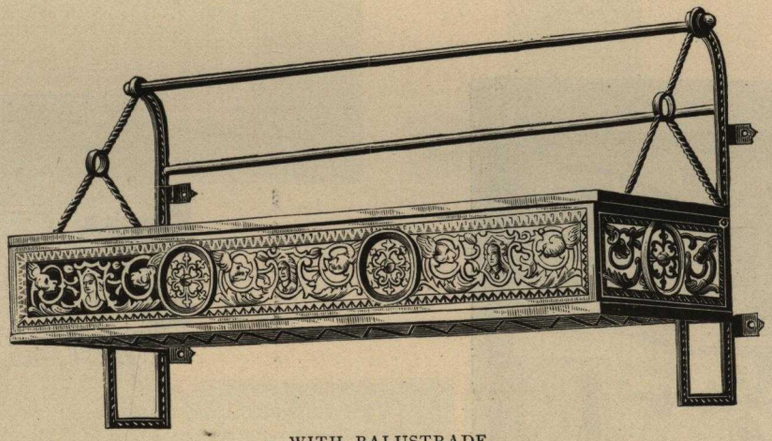
No. 60 24 inches long, with six Brass Rods.....Each, $10 00
60 24 " " six Japanned Rods..... " 8 50

BASKET RACKS.



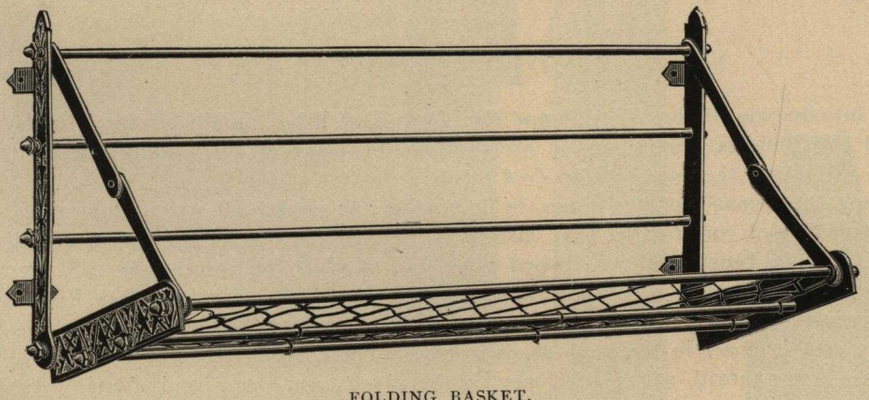
WITH ROUND-CORNERED BALUSTRADE AND PERFORATED BACKS.

No. 65 24 inches long, with three Brass Rods ..... Each, $10 00



WITH BALUSTRADE.

No. 66 24 inches long, with six Brass Rods ..... Each, $9 50
66 24 " " six Japanned Rods ..... " 8 50



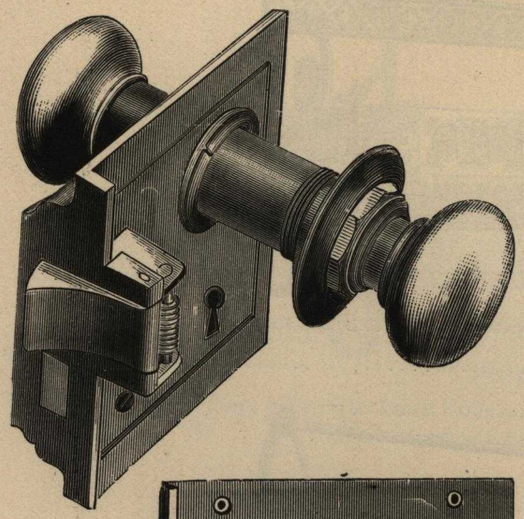
FOLDING BASKET.

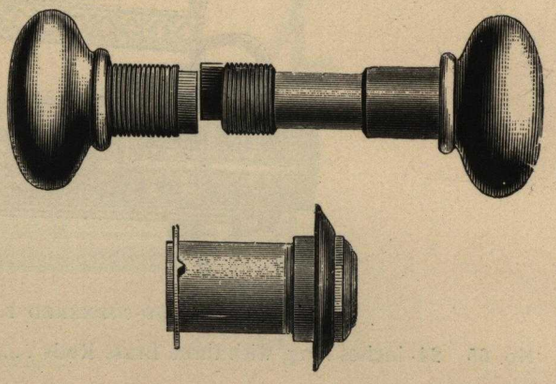
No. 67 24 inches long, with seven Brass Rods ..... Each, $6 00
67 24 " " seven Japanned Rods ..... " 4 50

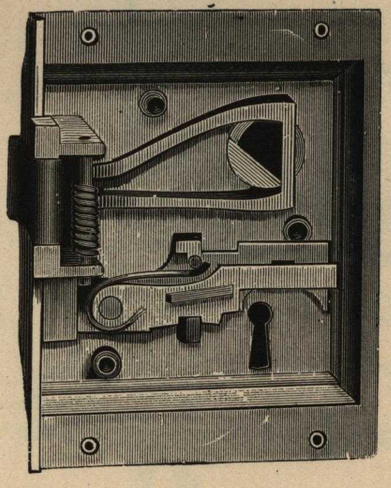
We have a variety of Baggage Racks, not shown in this Catalogue, intended for special use. Can readily make to order any pattern or style desired, either with or without Basket, and finish in Bronze, Ormolu, Nickel or Silver Plate.

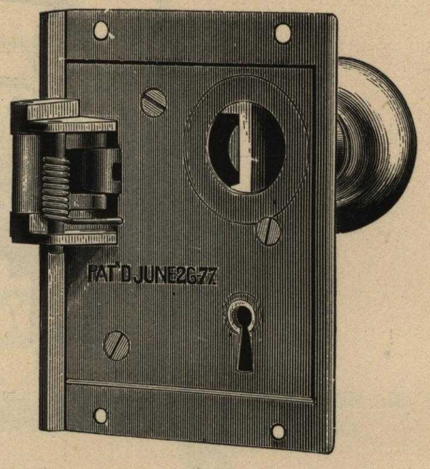
CAR DOOR RIM LOCKS.

Letters Patent, dated November 14, 1876; February 27, 1877; June 26, 1877; April 16, 1878; June 25, 1878.









NILES' IMPROVED PATENT CAR LOCK.

Since our introduction of the *Niles Patent Car Door Lock*, it has rapidly advanced in favor with Railway Companies and Car Builders, and is now in exclusive use on many of the leading lines in this country. It seems destined to become the *most popular Lock in use.*

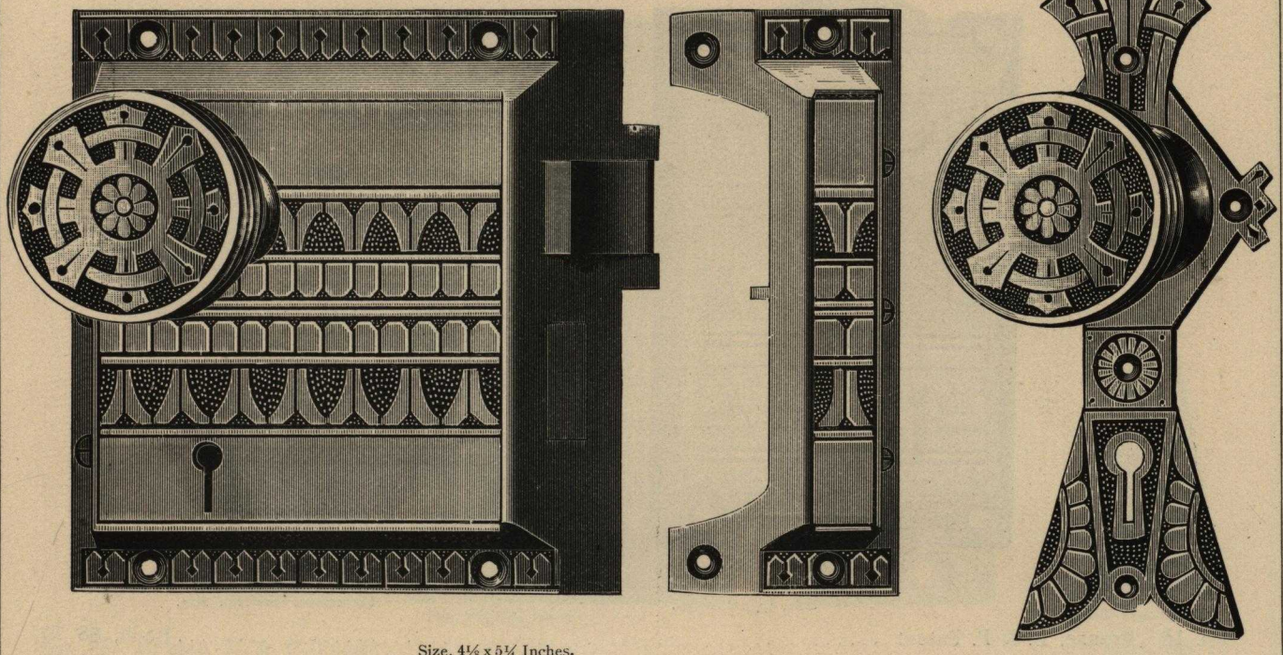
We have met the demand of the times by increasing the variety of styles, improving designs, and by simplifying the manner of construction have materially lessened the cost of this Lock, of which reduction we propose to give you the benefit, as per revised price list, to which we respectfully call your attention. We will add that our Patterns are now complete, and we are producing a low-priced *Iron* Rim Lock under Niles' patents. The peculiar merits of these patents are partially enumerated below.

1st. There are *no screws* in the knob shank or rose. The knobs have no hub or spindle, but are attached to the Lock by a screw thread, which attachment is the *closest, most secure* and *durable* possible. The knob knuckles directly upon the cam without any loss of motion, and consequently there is the *least possible friction.*

2d. Each knob *acts independent of the other* (thus avoiding the friction and wear produced by other attachments), and they *can not be made to bind* by any misplacement of the rose.

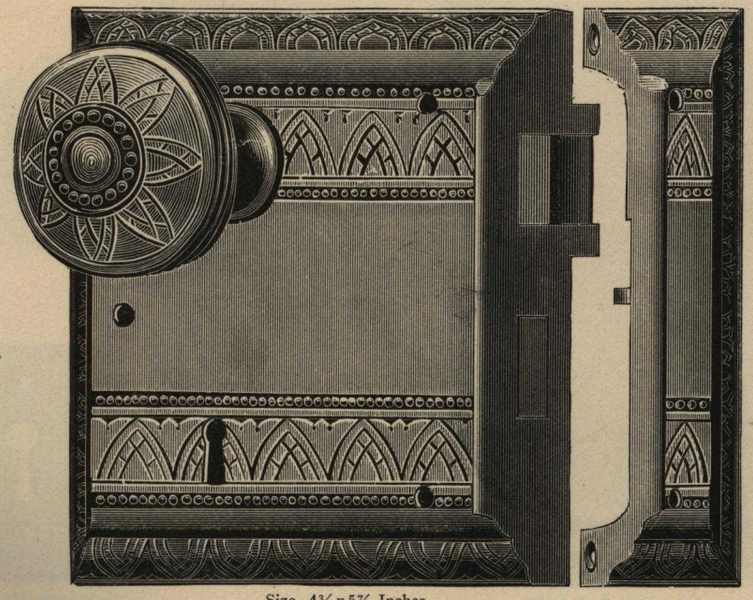
3d. The spring being twice as long a spiral as any heretofore used in Locks, there is but *half the elasticity* of the wire used at each retraction of the latch. It acts *directly* upon the latch, preventing any noise from *rattling* whilst the cars are in motion.

CAR DOOR RIM LOCKS.

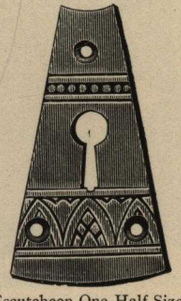


Size, 4⅛ x 5¼ Inches.

No. 14 Bronze, L. & P. Patent ..... Each, $8 75
14 Plated, " " ..... " 8 75



Size, 4¾ x 5⅞ Inches.

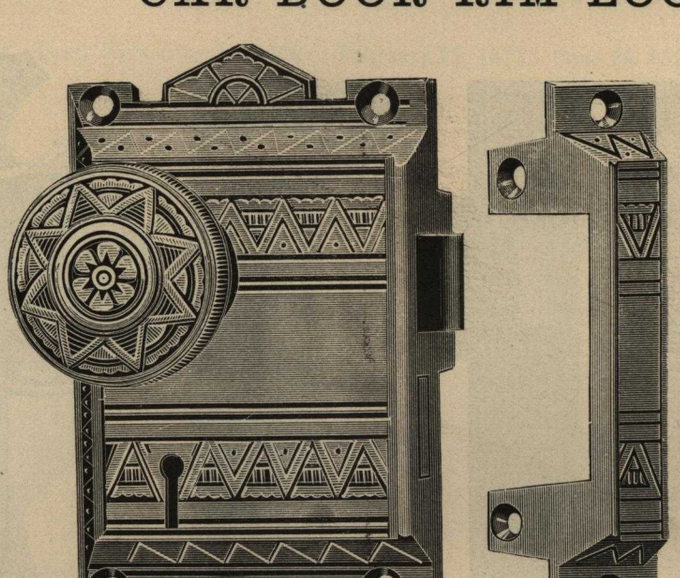


Escutcheon One-Half Size.

No. 15 Bronze, L. & P. Patent ..... Each, $8 75
15 Plated, " " ..... " 8 75

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

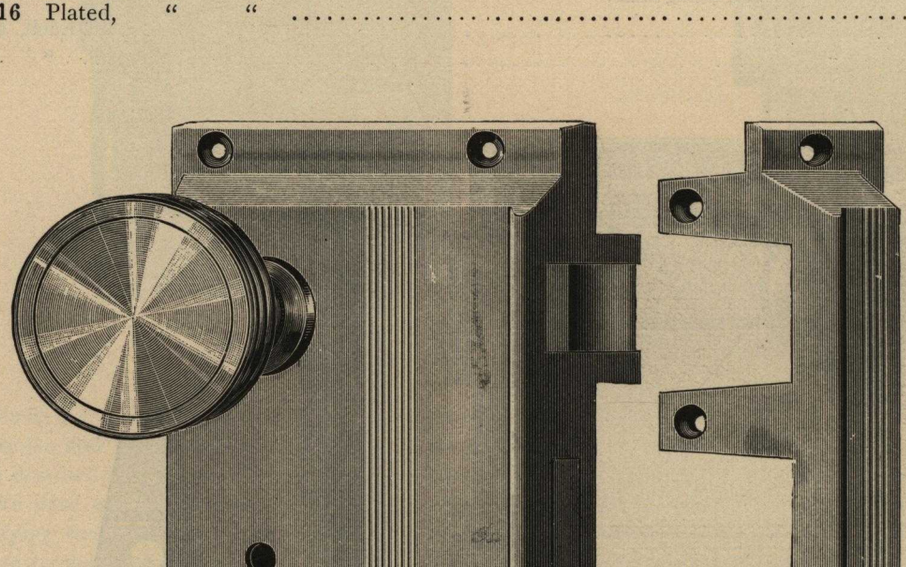
CAR DOOR RIM LOCKS.



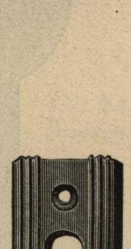
Size, 4¼ x 6 Inches.

Escutcheon One-Half Size.

No. 16 Bronze, L. & P. Patent ..... Each, $8 75
16 Plated, " " ..... " 8 75



Size, 4 x 6 Inches.

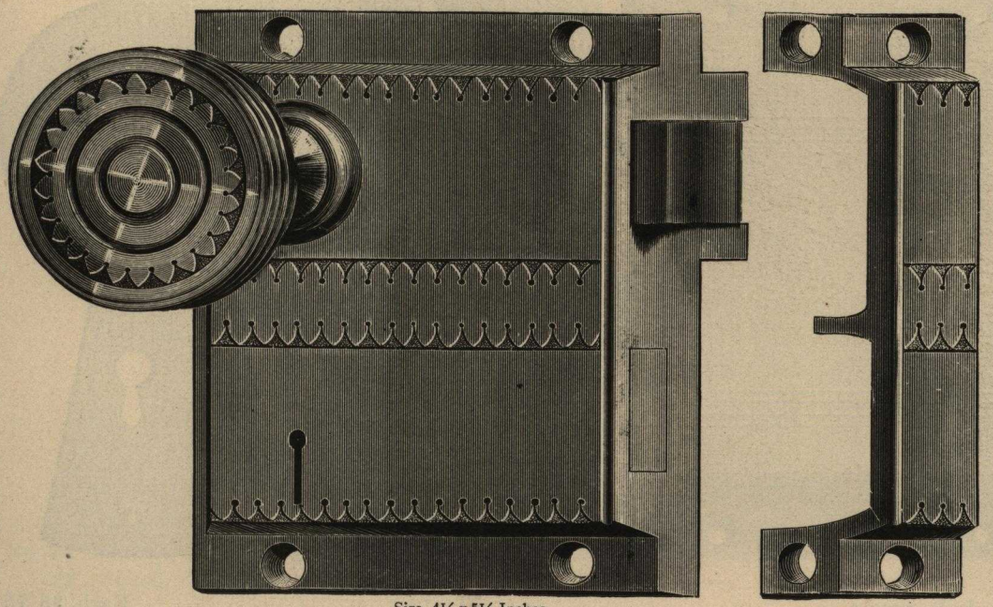


Escutcheon One-Half Size.

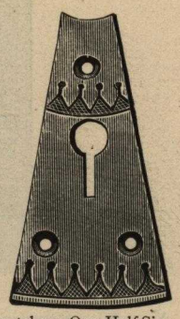
No. 17 Bronze, L. & P. Patent ..... Each, $8 75
17 Plated, " " ..... " 8 75

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

CAR DOOR RIM LOCKS.

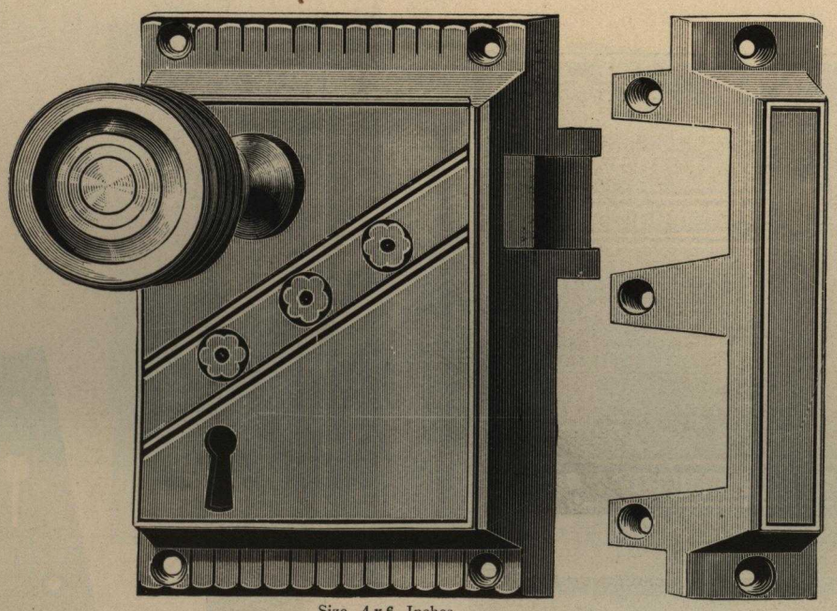


Size, 4⅛ x 5⅛ Inches.

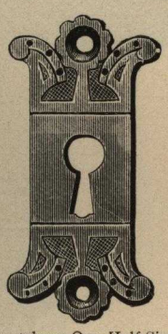


Escutcheon One-Half Size.

No. 18 Bronze, L. & P. Patent.....Each, $8 75
18 Plated, " " ..... " 8 75



Size, 4 x 6 Inches.

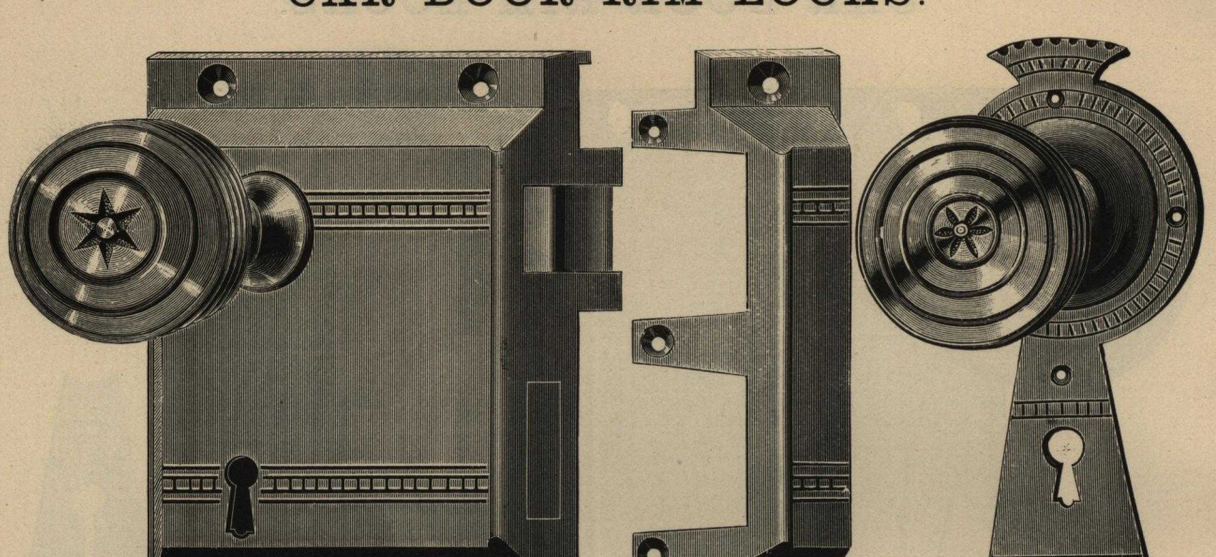


Escutcheon One-Half Size.

No. 19 Bronze, L. & P. Patent .....Each, $8 75
19 Plated, " " ..... " 8 75

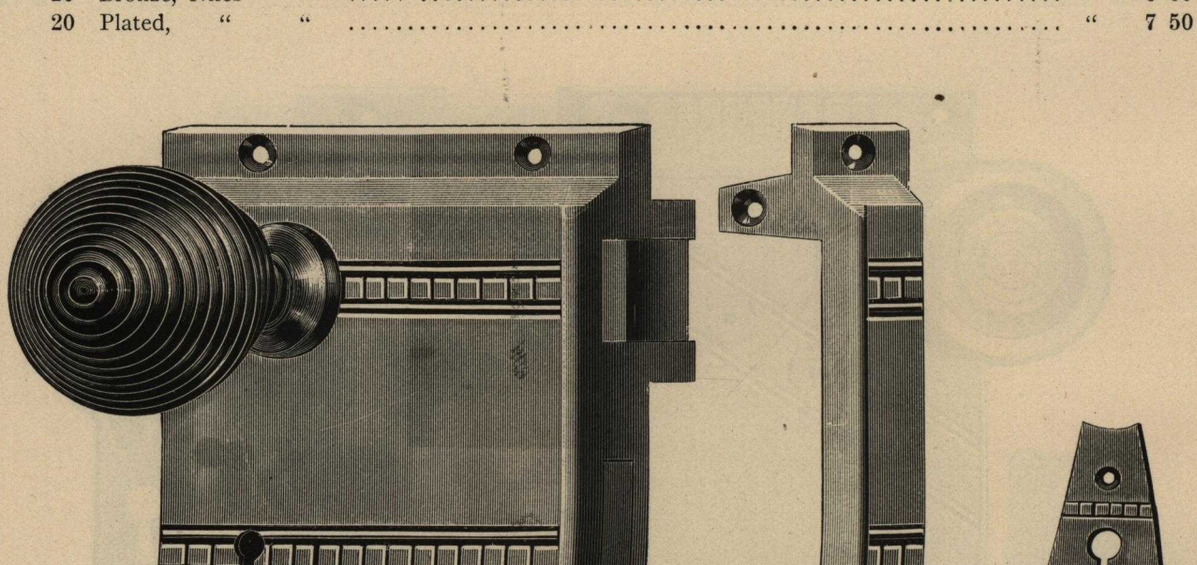
NOTE.—In ordering Locks please designate number, kind and material, that orders may be executed correctly.

CAR DOOR RIM LOCKS.



Size, 4 x 5¾ Inches.

No. 20	Bronze, L. & P. Patent	Each,	$8 75
20	Plated, " "	"	8 75
20	Bronze, Niles "	"	6 00
20	Plated, " "	"	7 50



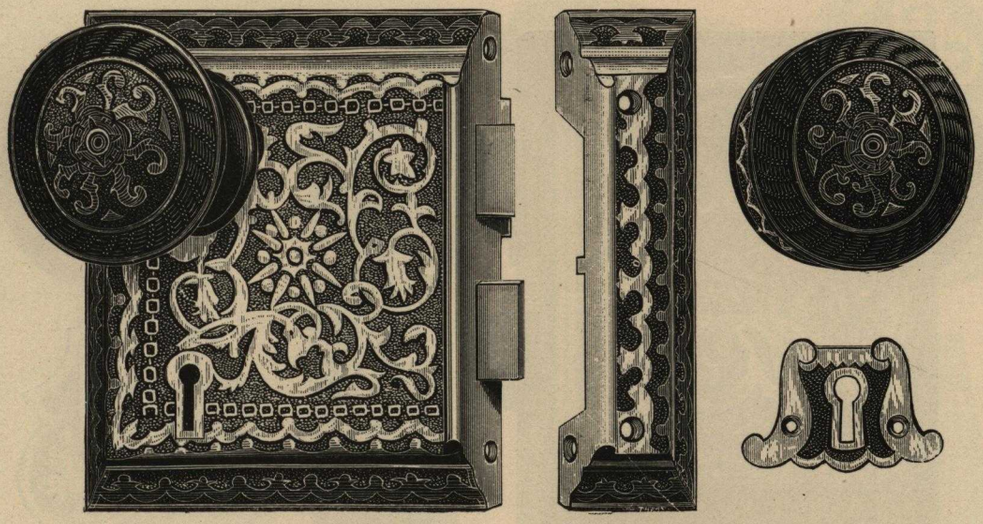
Size, 4⅛ x 5⅛ Inches.

Escutcheon One-Half Size.

No. 21	Bronze, L. & P. Patent	Each,	$8 75
21	Plated, " "	"	8 75

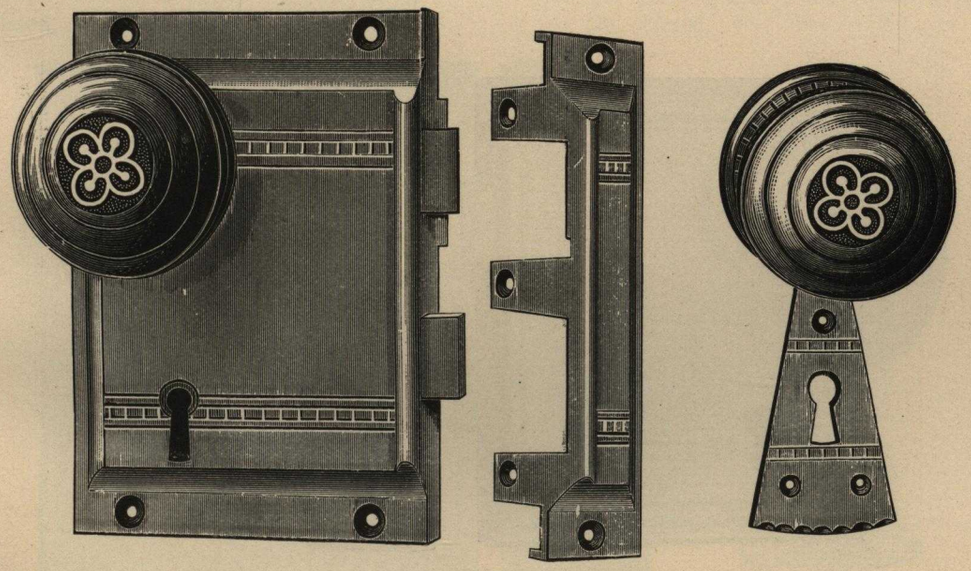
NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

CAR DOOR RIM LOCKS.



Size, 4½ x 5¼ Inches.

No. 22	Bronze, Niles' Patent	Each,	$6 00
22	Plated, "	"	7 50

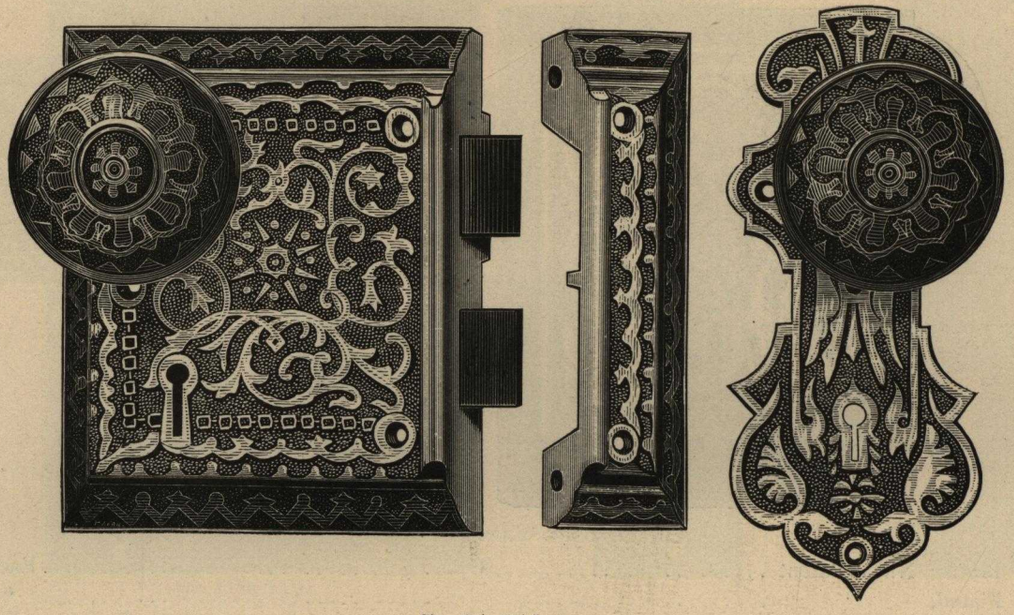


Size, 4 x 5¾ Inches.

No. 23	Bronze, with L. & F. Patent	Each,	$8 75
23	Plated, " " "	"	8 75
23	Bronze, with Niles' Patent	"	6 00
23	Plated, " "	"	7 50

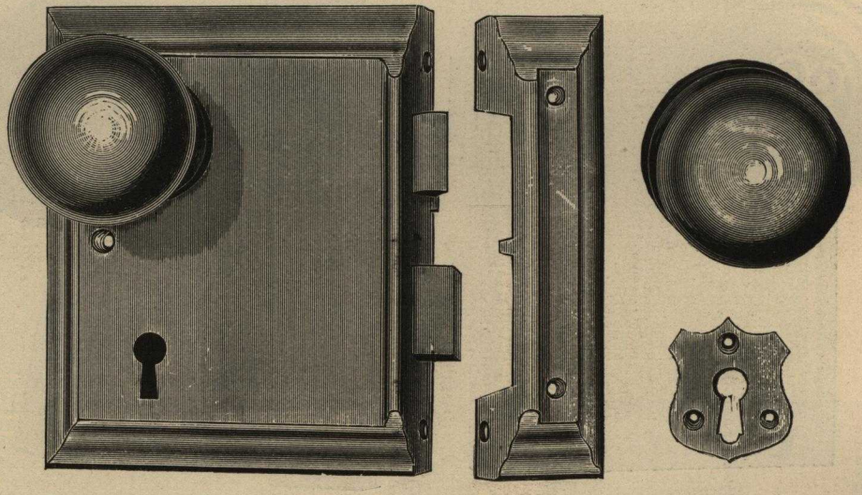
NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

CAR DOOR RIM LOCKS.



Size, 4½ x 5¼ Inches.

No. 25	Bronze, L. & P. Patent	Each,	$8 75
25	Plated, " "	"	8 75

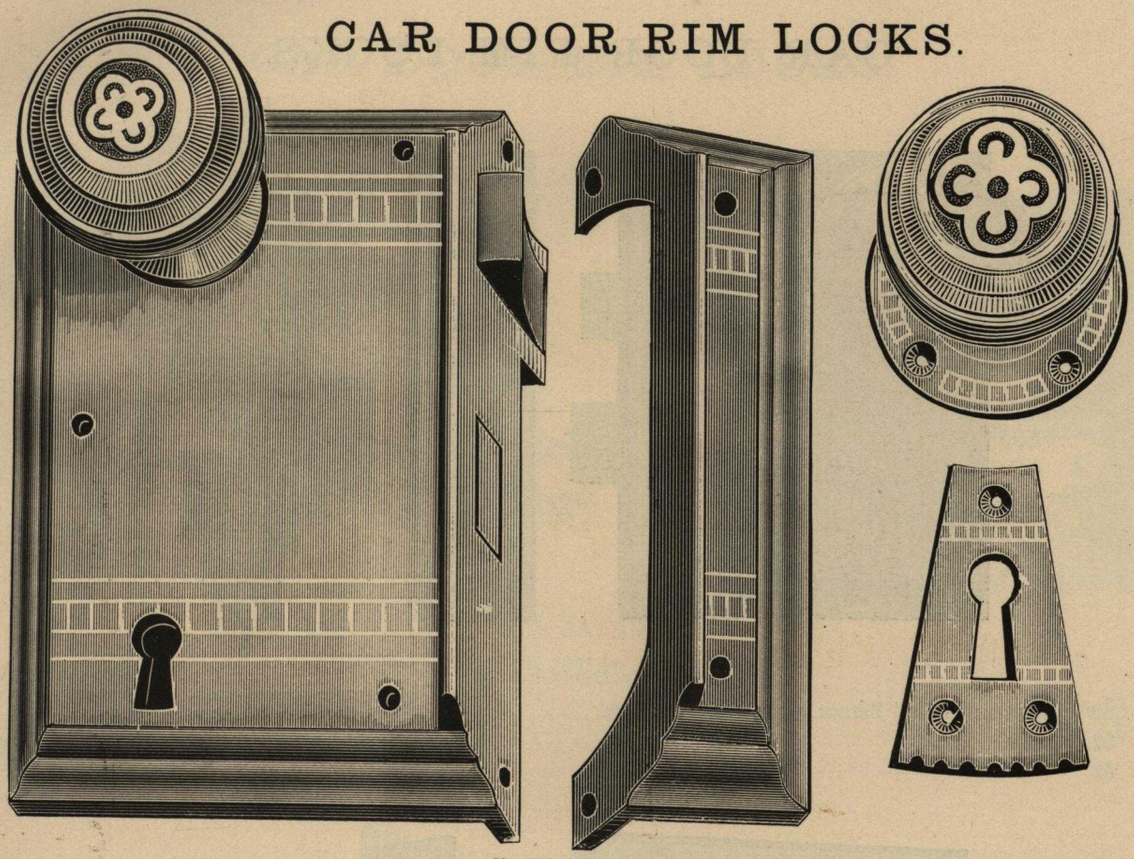


Size, 4½ x 5¼ Inches.

No. 24	Brass, L. & P. Patent	Each,	$7 50
24	Plated, " "	"	8 75
24	Brass, Niles' "	"	6 00
24	Plated, " "	"	7 50

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

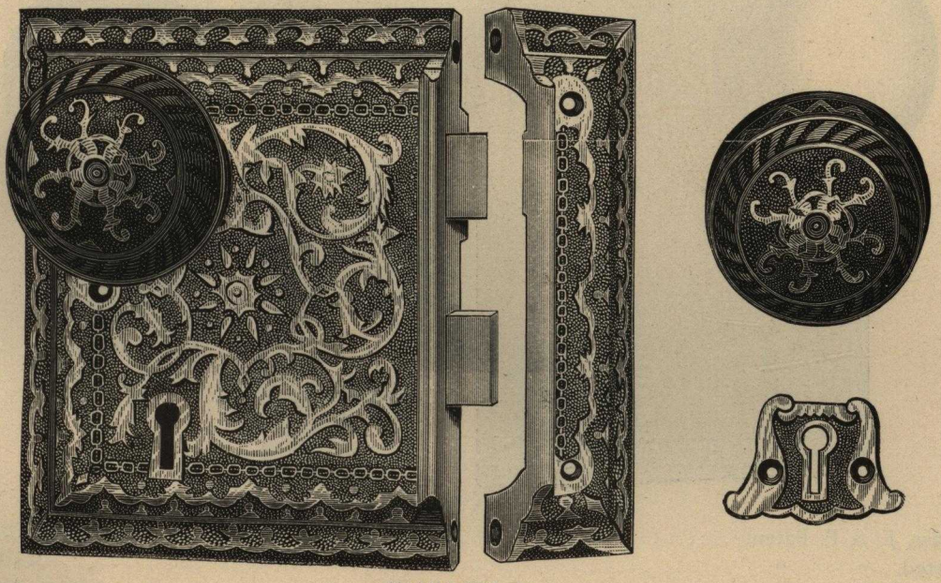
CAR DOOR RIM LOCKS.



Size, 4¾ x 5⅞ Inches.

No 26 Bronze, with L. & P. Patent.....Each, $8 75
26 Plated, " " " ... " 8 75

No. 26 Bronze, with Niles' Patent...Each, $6 00
26 Plated, " " " ... " 7 50

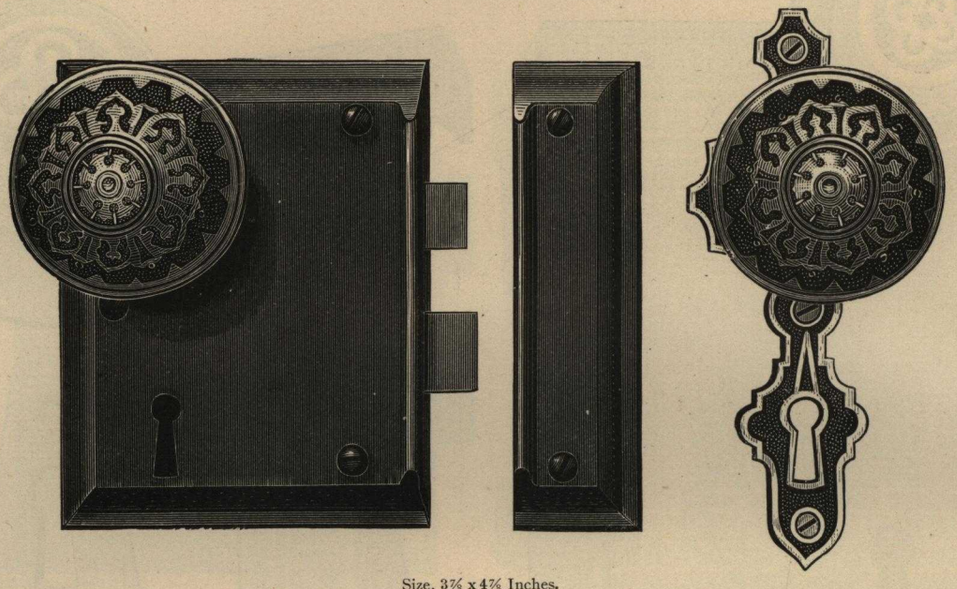


Size, 4¾ x 5⅞ Inches.

No. 28 Bronze, L. & P. Patent ....Each, $8 75
28 Plated, " " ..... " 8 75
28 Bronze, Niles' " ..... " 6 00
28 Plated, " " ..... " 7 50

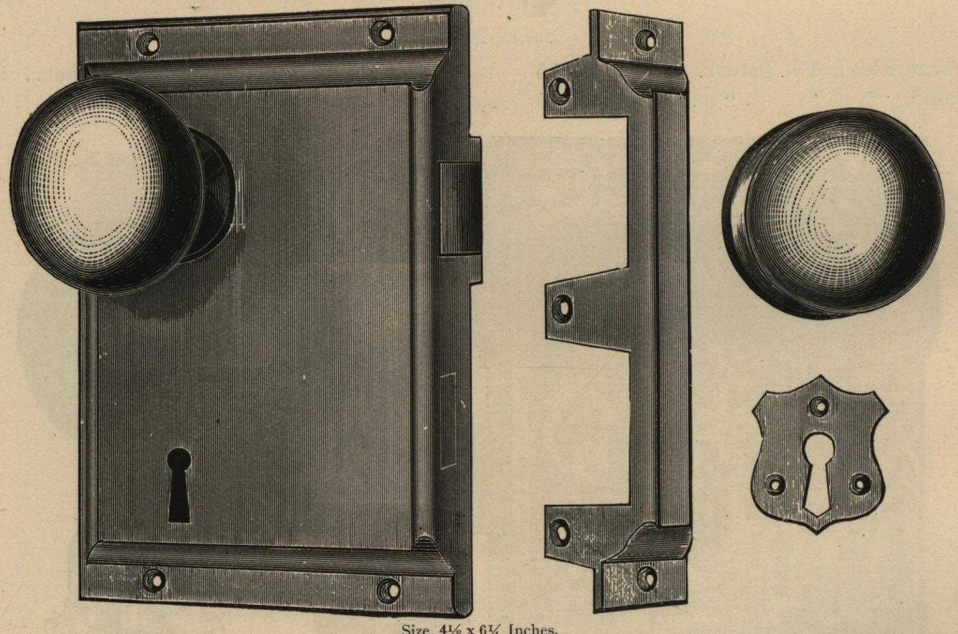
NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

CAR DOOR RIM LOCKS.



Size, 3⅞ x 4⅞ Inches.

No. 32	Japanned, Niles' Patent, with Bronze Knobs	Each, $2 50
32	" " " " Brass "	" 2 25
32	" " " " Iron "	" 2 00

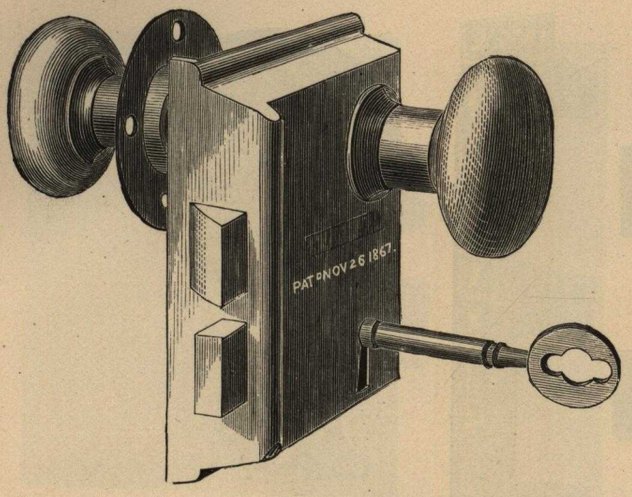


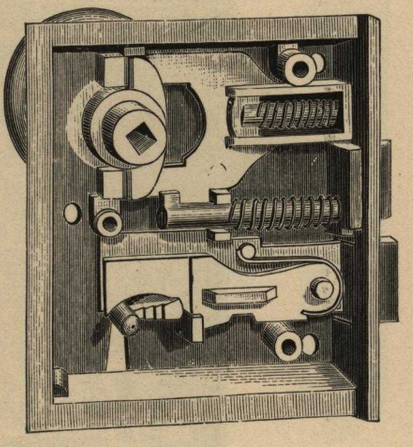
Size, 4⅛ x 6¼ Inches.

No. 60	Brass, L. & P. Patent	Each, $7 50
60	Plated, " "	" 8 75
60	Brass, Niles' "	" 6 00
60	Plated, " "	" 7 50
60	Iron, " " Iron Knobs	" 3 50
60	" " " Brass "	" 4 00

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

CAR DOOR RIM LOCKS.

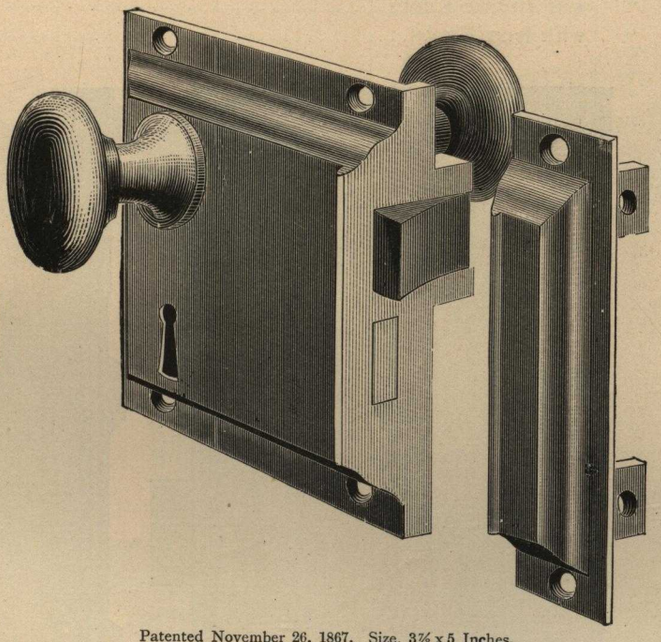




CAR LOCK, L. & P. PATENT, COMPLETE.

Patented November 26, 1867. Size, 3¾ x 4⅜ Inches.

No. 71	Rim Lock, Slide Latch, Brass	Each,	$7 50
71	" " Plated	"	8 75



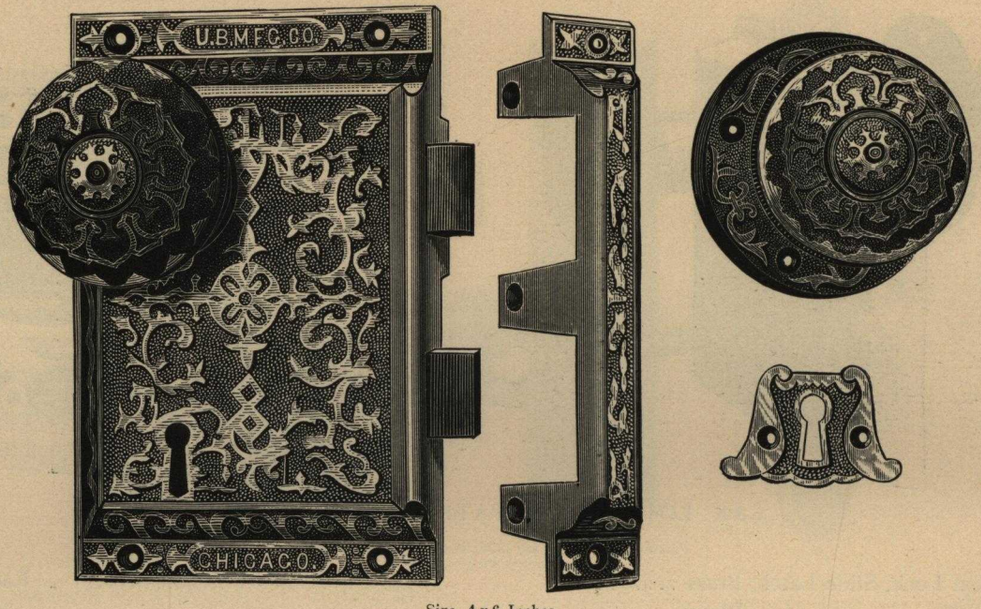
Patented November 26, 1867. Size, 3⅞ x 5 Inches.

No. 72	Brass, L. & P. Patent	Each,	$7 50
72	Plated, " "	"	8 75
72	Brass, Niles' "	"	6 00
72	Plated, " "	"	7 50

We make the same Lock in Q. A. design.

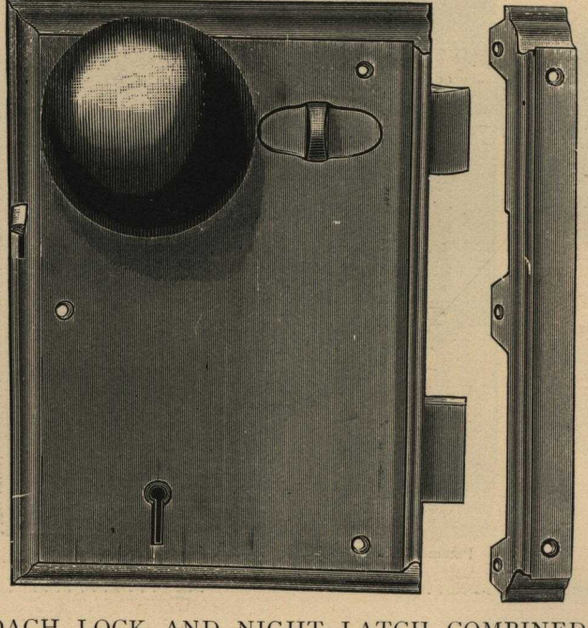
NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

CAR DOOR RIM LOCKS.



Size, 4 x 6 Inches

No. 61	Bronze, L. & P. Patent		Each,	$8 75
61	Bronze, Niles'	"	"	6 00
61	Iron,	" " with Bronze Knobs	"	4 00
61	Iron,	" " with Iron Knobs	"	3 50



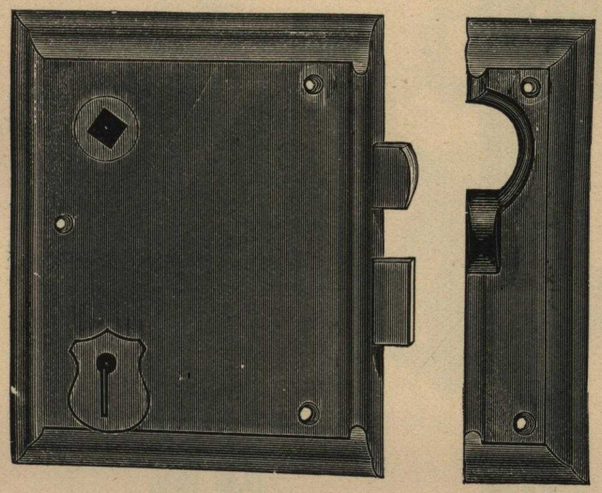
COACH LOCK AND NIGHT LATCH COMBINED.

Size, 4⅜ x 6¼ Inches.

No. 105	Brass, L. & P. Patent	Each,	$10 00
105	Plated, " "	"	12 00

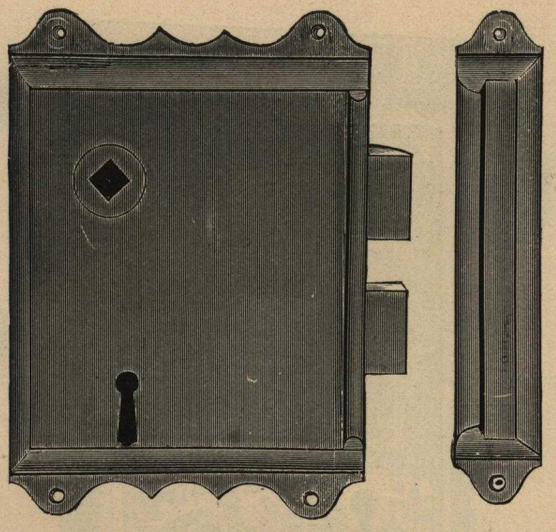
NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

CAR DOOR RIM LOCKS.



Size, 3⅞ x 4⅞ Inches.

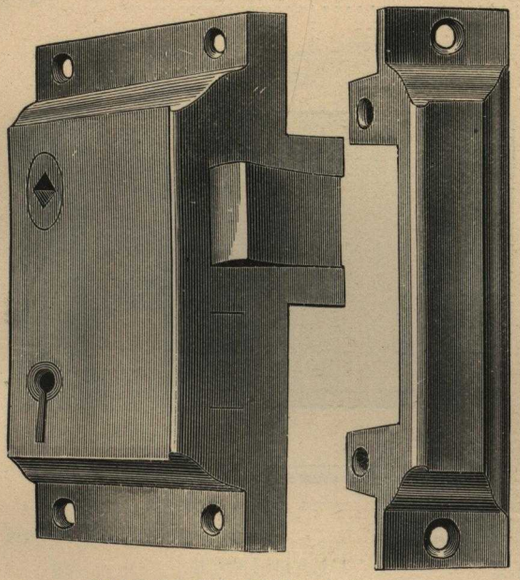
No. 31 Lift Latch, Brass.....Each, $3 00
31 " Plated..... " 3 75
31 " Japanned..... " 1 10



CAR RIM LOCK

Size, 3¾ x 5⅛ Inches.

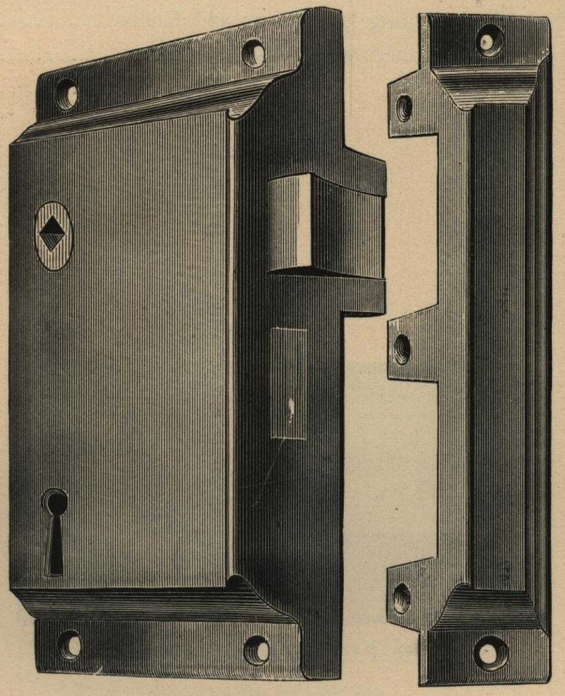
No. 33 Brass.....Each, $3 50
33 Plated..... " 4 50



RIM LOCK, SWING BOLT.

Size, 3⅞ x 5 Inches.

No. 81 Brass.....Each, $3 50
81 Plated..... " 4 50



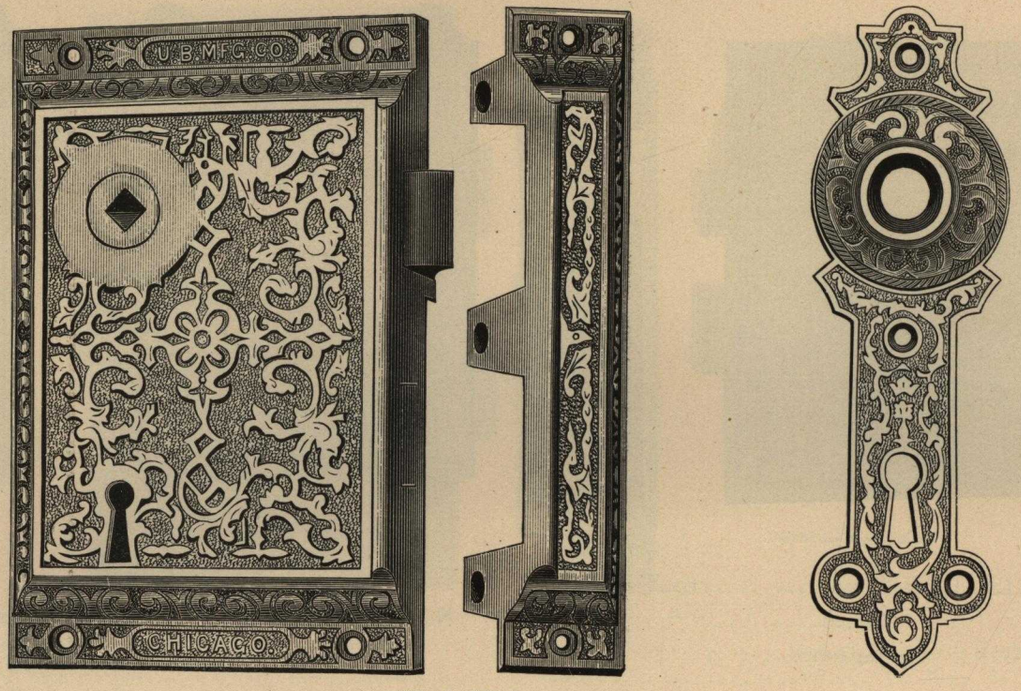
RIM LOCK, SWING BOLT.

Size, 4⅛ x 6¼ Inches.

No. 84 Japanned.....Each, $2 50

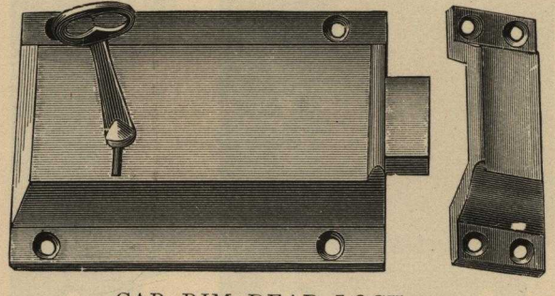
NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

CAR DOOR RIM LOCKS.



Size, 4 x 6 Inches.

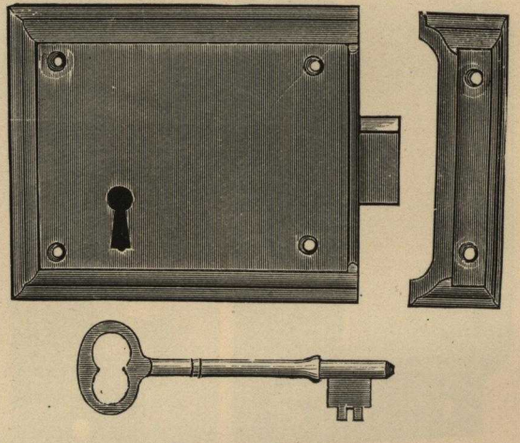
No. 83	Including Escutcheon and Knobs	Each,	$7 00
83	Japanned, with Brass Knobs	"	4 50
83	" " Iron "	"	4 00



CAR RIM DEAD LOCK.

Size, 2⅞ x 3¾ Inches.

No. 90	Brass	Each,	$3 00
90	Plated	"	3 50



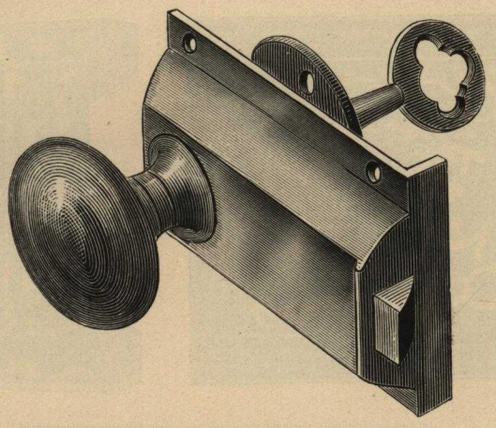
DEAD LOCK.

Size, 3⅛ x 3⅝ Inches.

No. 98	Brass	Each,	$3 25
98	Plated	"	3 75

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

CAR DOOR RIM LOCKS.

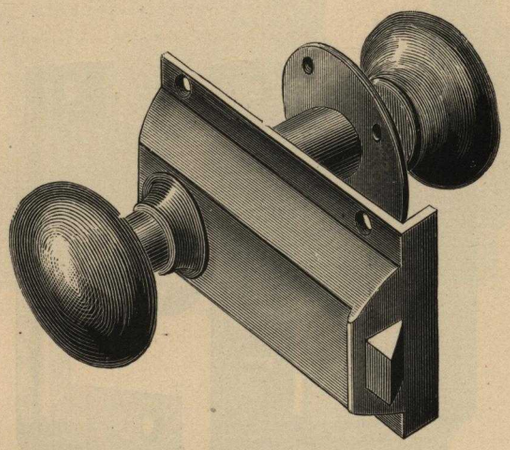


BAGGAGE CAR DOOR LOCK.

(SPRING DOOR LATCH OR NIGHT LATCH).

Size, 2⅞ x 3⅞ Inches.

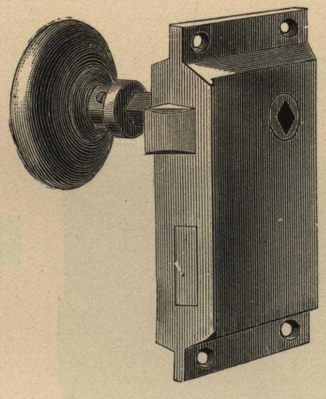
No. 88	Brass	Each,	$4 00
88	Bronze	"	5 00
88	Plated	"	5 00



COACH DOOR LATCH.

Size, 2⅞ x 3⅞ Inches.

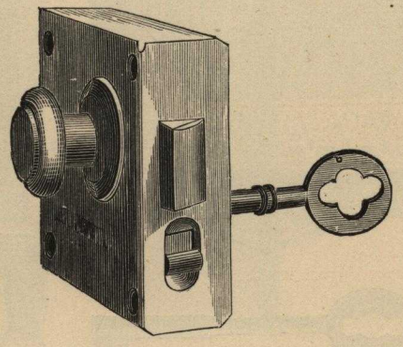
No. 89	Brass	Each,	$4 50
89	Plated	"	6 00



LINEN CLOSET LOCK.

Size, 1⅞ x 4¼ Inches.

No. 87	With Knob, Brass	Each,	$2 25
87	" " Plated	"	2 50
87	Bronze	"	2 50
87	" Flush Handle	"	4 00
87	With Flush Handle, Plated	"	4 00



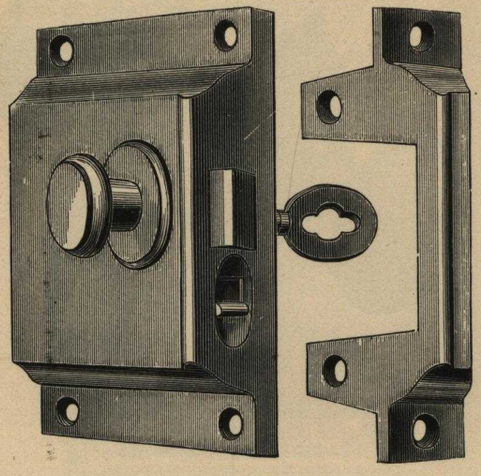
NIGHT LATCH.

Size, 2½ x 3 Inches.

No. 79	Brass	Each,	$3 50
79	Plated	"	4 00

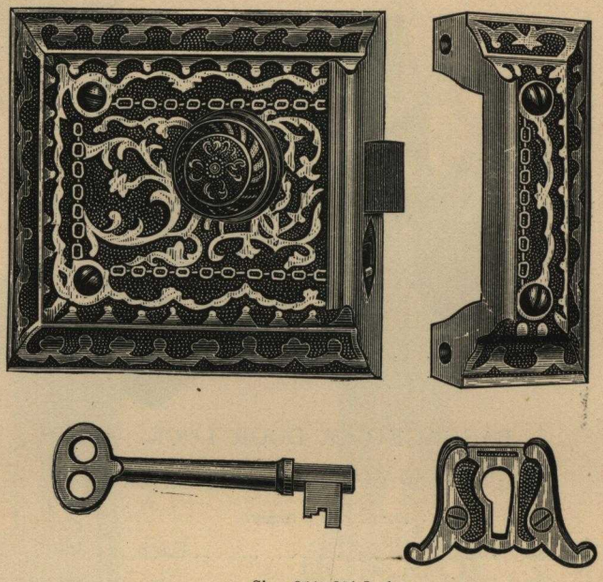
NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

NIGHT LATCHES.



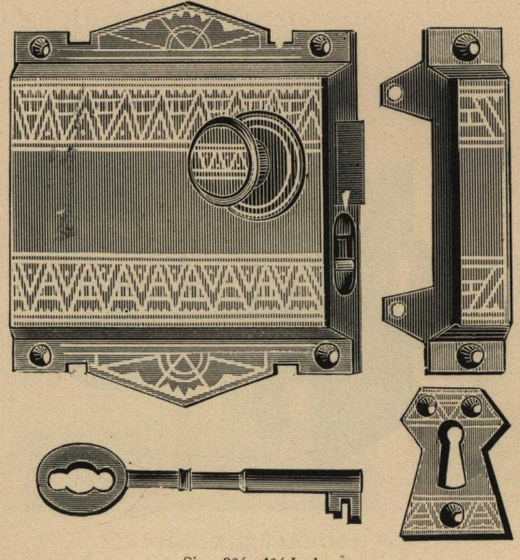
Size, 3¼ x 4⅛ Inches.

No. 91 Brass ..... Each, $3 50
91 Plated ..... " 4 00



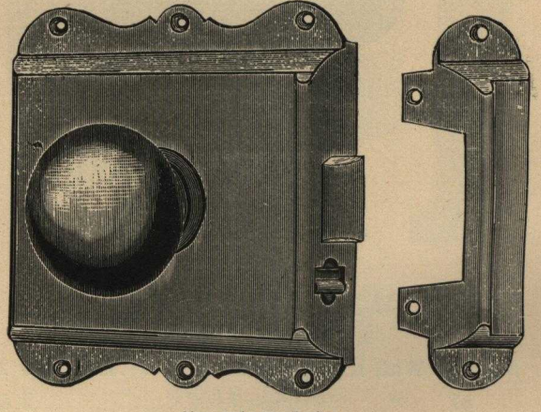
Size, 3⅝ x 3⅞ Inches.

No. 62 Bronze ..... Each, $4 00
62 Plated ..... " 4 00



Size, 3⅜ x 4¾ Inches.

No. 92 Bronze ..... Each, $4 50
92 Plated ..... " 4 50



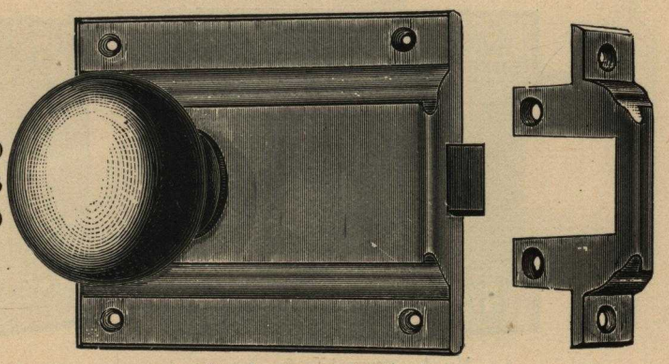
Size, 3½ x 3⅝ Inches.

No. 97 Brass ..... Each, $4 00
97 Plated ..... " 4 50

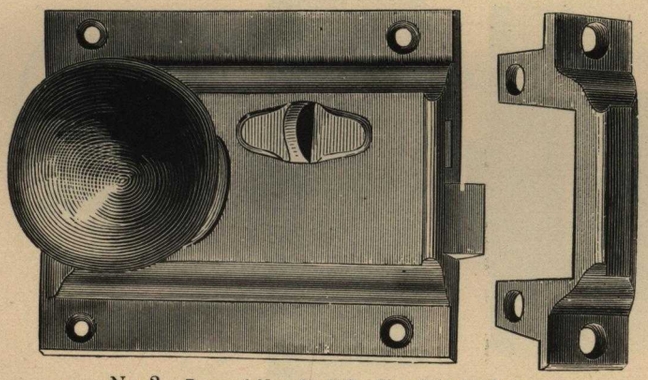
NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

SALOON LATCHES.

No. 1	Brass, L. & P. Patent	Each,	$6 00
1	Plated, " "	"	7 25
1	With Flush Handle	"	7 50

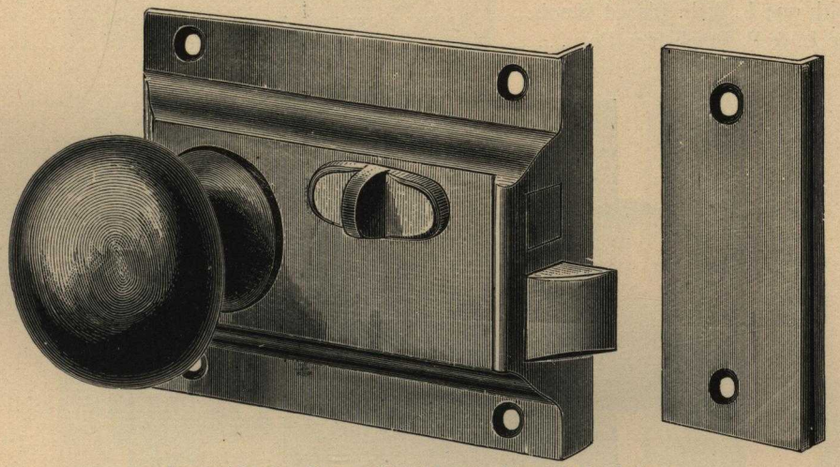


No. 1. Size, 3⅜ x 4⅛ Inches.



No. 2. Patented Nov. 26, 1867. Size, 3⅜ x 4⅛ Inches.

No. 2	Slide Bolt, Brass	Each,	$6 00
2	" Plated	"	7 25
2	" with Flush Handle, Plated	"	7 50
2	Brass, Niles' Patent	"	4 50
2	Plated, "	"	6 00

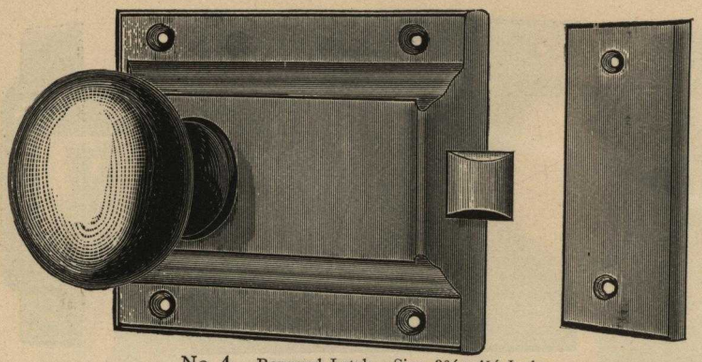


Reversed Latch. Patented Nov. 26, 1867. Size, 3⅜ x 4⅛ Inches.

No. 3	Slide Bolt, Brass	Each,	$6 00
3	" Plated	"	7 25
3	" with Flush Handle	"	7 50
3	" Bronze	"	7 25
3	" Iron Bronze and Iron Bronze Knobs	"	4 50

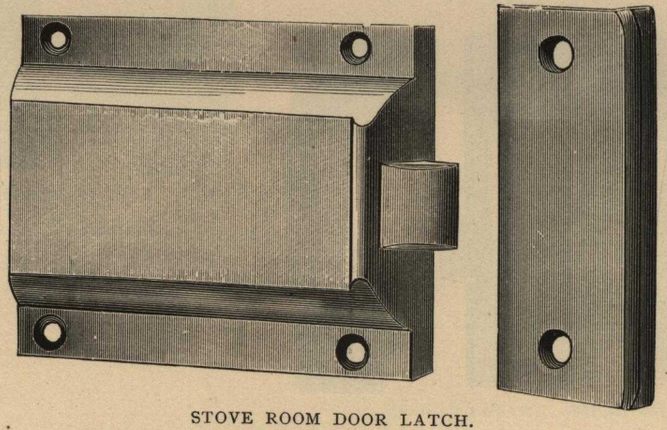
NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

SALOON LATCHES.



No. 4. Reversed Latch. Size, 3⅜ x 4⅛ Inches.

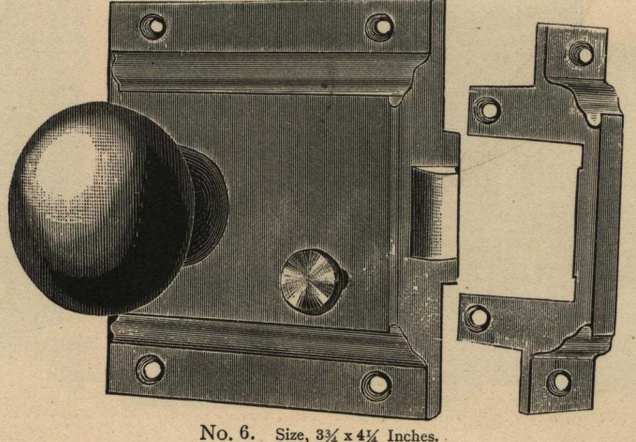
No. 4	Brass, L. & P. Patent	Each,	$6 00
4	Plated, " "	"	7 25
4	With Flush Handle	"	7 50



STOVE ROOM DOOR LATCH.

Size, 3 x 3⅞ Inches.

No. 5	Brass, with one L. & P. Plated Knob	Each,	$4 50
5	With one L. & P. Flush Handle	"	4 75



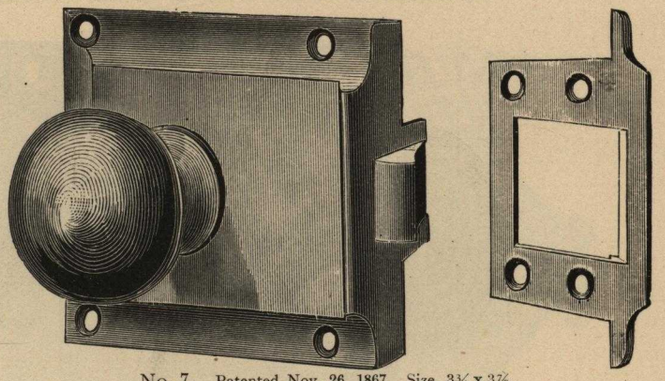
No. 6. Size, 3¾ x 4¼ Inches.

No. 6	Brass, L. & P. Patent	Each,	$6 00
6	Plated, " "	"	7 25
6	" " " Flush Handle	"	7 50

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed promptly.

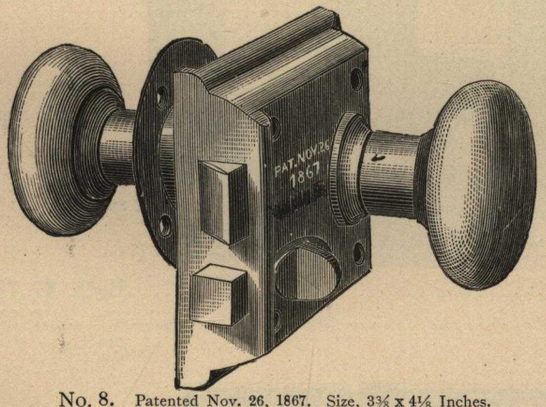
SALOON LOCKS AND LATCHES.

No. 7	Swing Bolt, Brass	Each,	$6 00
7	" Plated	"	7 25
7	" Flush Handle, Plated	"	7 50



No. 7. Patented Nov. 26, 1867. Size, 3¾ x 3⅞.

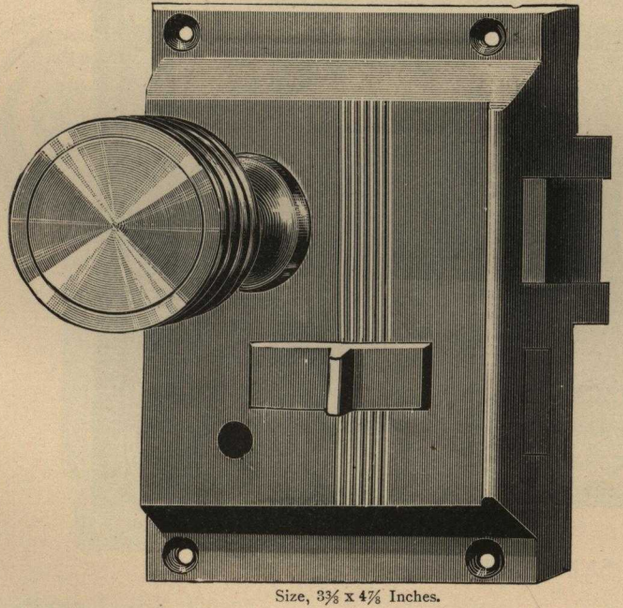
SALOON LATCH.



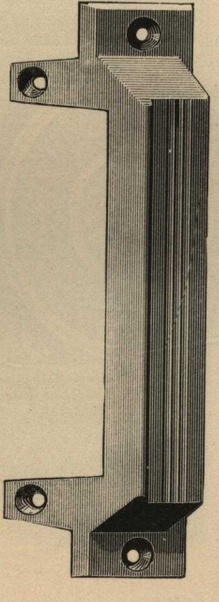
No. 8. Patented Nov. 26, 1867. Size, 3⅜ x 4⅛ Inches.

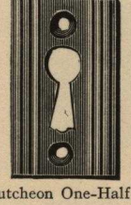
No. 8	Slide Bolt, Brass	Each,	$6 00
8	" Plated	"	7 25
8	With Flush Handle, Plated...	"	7 50

SALOON LATCH.



Size, 3⅜ x 4⅞ Inches.





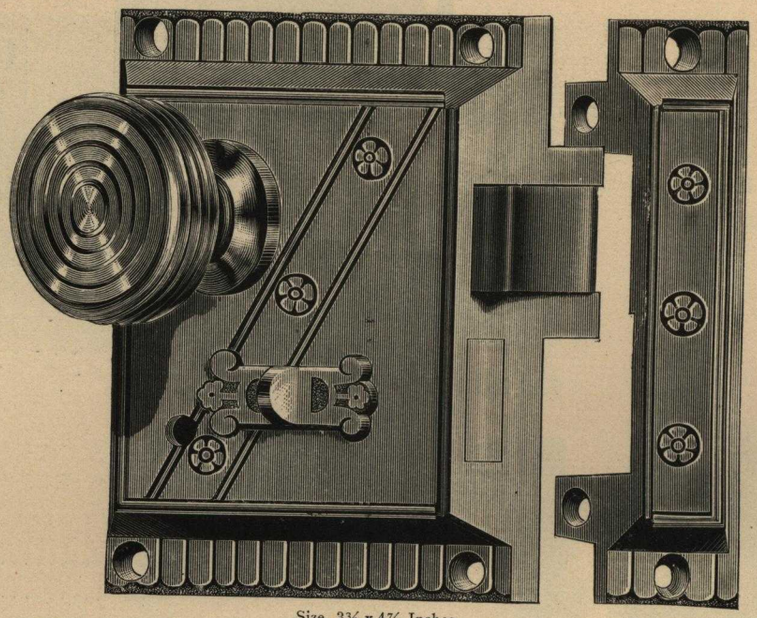
Escutcheon One-Half Size.

SALOON LOCK.

No. 11	Bronze, L. & P. Patent	Each,	$7 75
11	Plated, " "	"	7 75

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

SALOON LOCKS AND LATCHES.

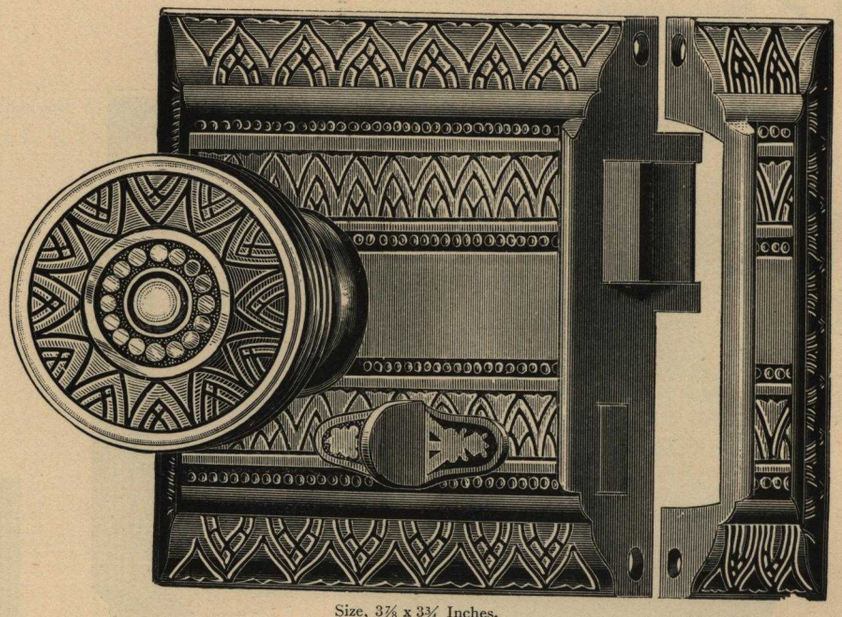


Size, 3⅜ x 4⅞ Inches.

Escutcheon One-Half Size.

SALOON LOCK.

No. 12	Bronze, L. & P. Patent	Each,	$7 75
12	Plated, " "	"	7 75



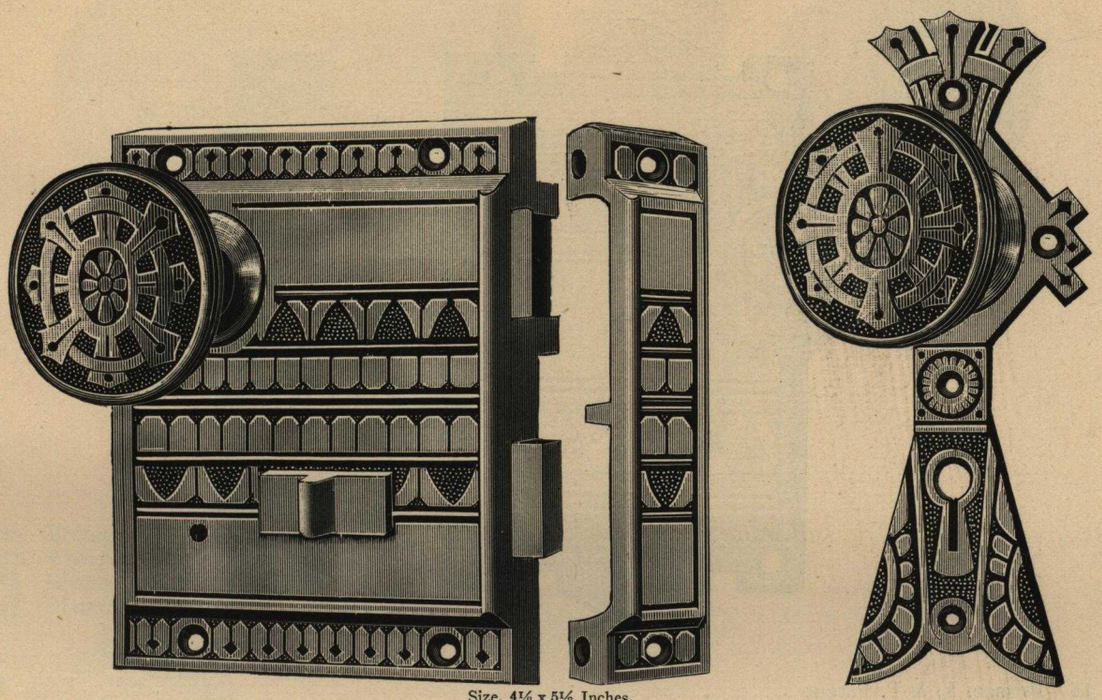
Size, 3⅞ x 3¾ Inches.

SALOON LATCH.

No. 13	Bronze, L. & P. Patent	Each,	$7 25
13	Plated, " "	"	7 25

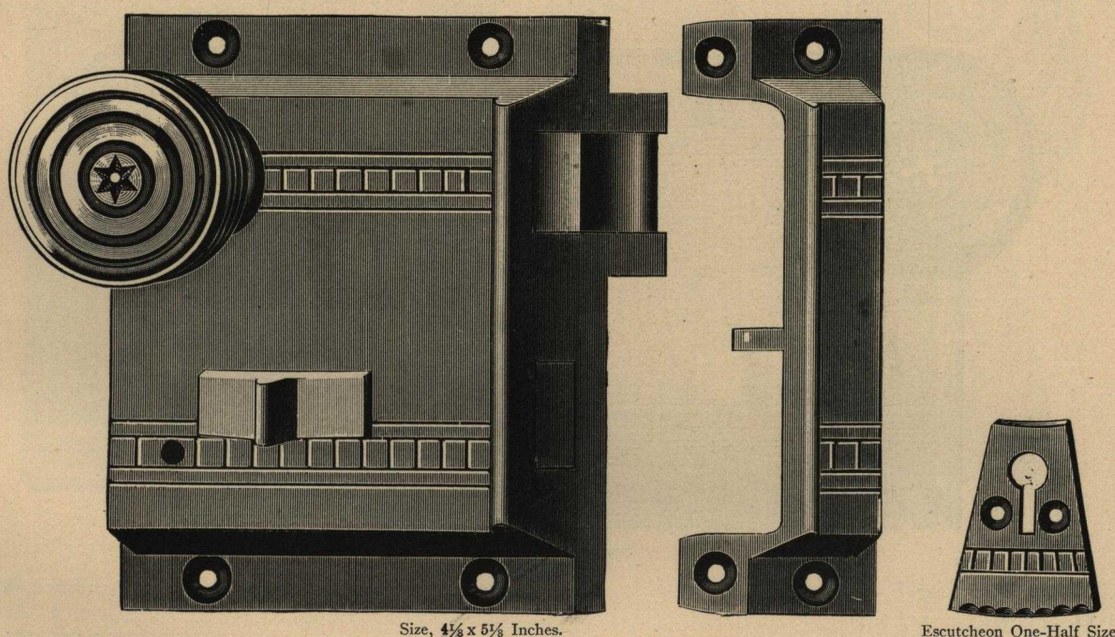
NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

SALOON LOCKS.



Size, 4⅛ x 5⅛ Inches.

No. 14 Bronze, L. & P. Patent ..... Each, $7 75
14 Plated, " " ..... " 7 75



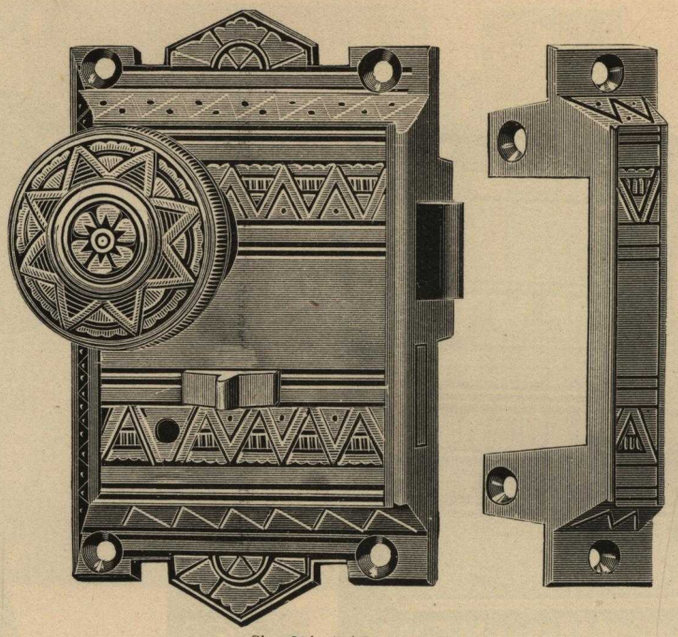
Size, 4⅛ x 5⅛ Inches.

Escutcheon One-Half Size.

No. 15 Bronze, L. & P. Patent ..... Each, $7 75
15 Plated, " " ..... " 7 75

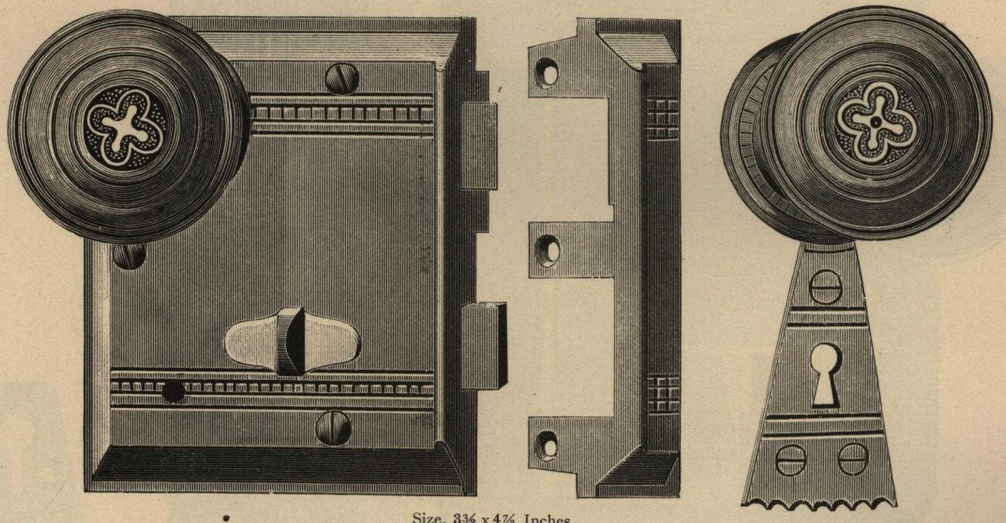
NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

SALOON LOCKS.



Size, 3⅜ x 5¼ Inches.

No. 16	Bronze, L. & P. Patent	Each,	$7 75
16	Plated, " "	"	7 75
16	Bronze, Niles' "	"	5 00
16	Plated, " "	"	6 50



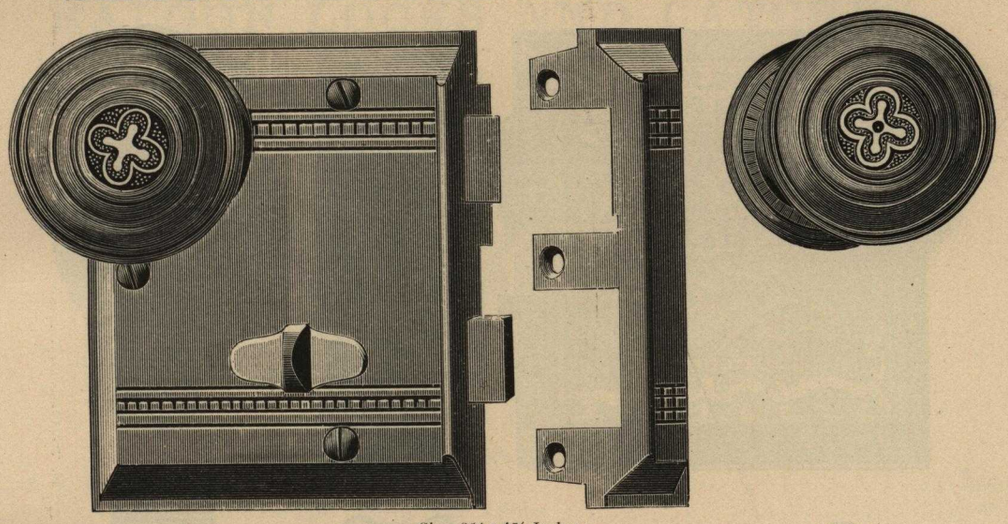
Size, 3⅜ x 4⅞ Inches.

No. 22	Bronze, L. & P. Patent	Each,	$7 75
22	Plated, " "	"	7 75
22	Bronze, Niles' Patent	"	5 00
22	Plated, " "	"	6 50

We make the same Lock 4⅛ x 5 inches.

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

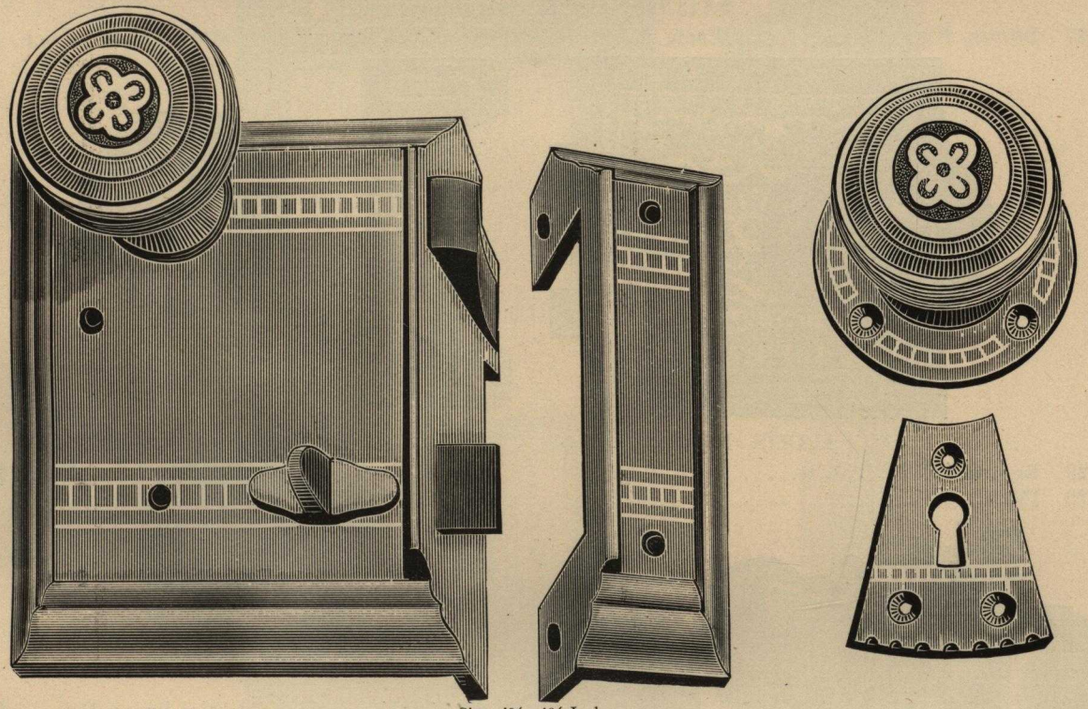
SALOON LOCKS AND LATCHES.



Size, 3⅝ x 4⅞ Inches.

SALOON LATCH.

No. 23	Bronze, L. & P. Patent	Each, $7 25
23	Plated, " "	" 7 25
23	Bronze, Niles' "	" 4 50
23	Plated, " "	" 6 00



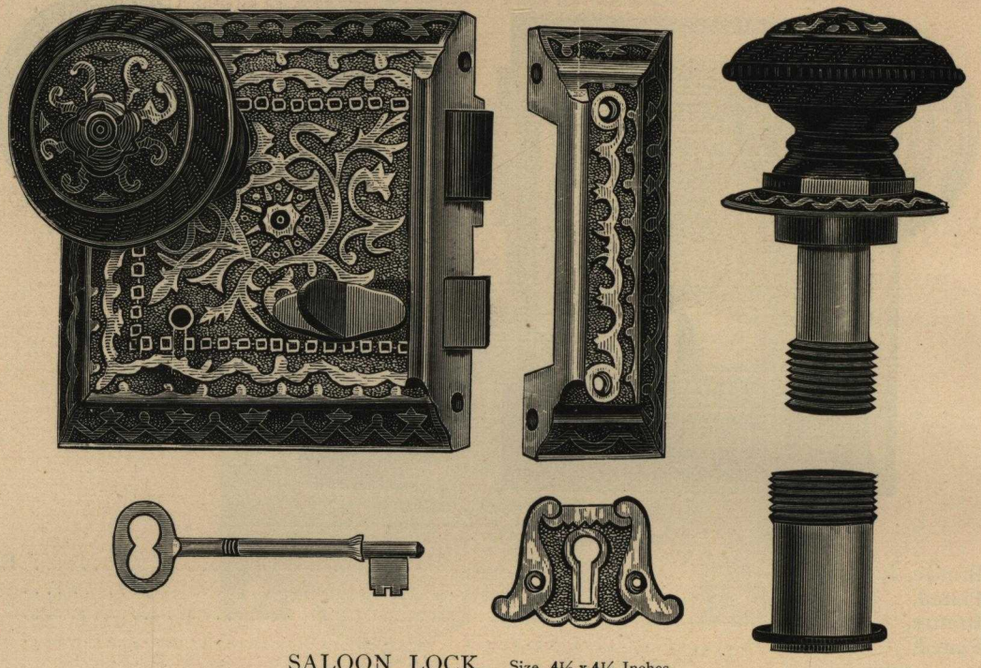
Size, 4⅛ x 4⅜ Inches.

SALOON LOCK.

No. 26	Bronze, L. & P. Patent	Each, $7 75
26	Plated, " "	" 7 75
26	Bronze, Niles' "	" 5 00
26	Plated, " "	" 6 50
26	Saloon Latch, same style as No. 26 Saloon Lock, size 3¾ x 3⅞, Bronze, L. & P. Patent	" 7 25
26	" " " " " Plated, " "	" 7 25
26	" " " " " Bronze, Niles' "	" 4 50
26	" " " " " Plated, " "	" 6 00

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

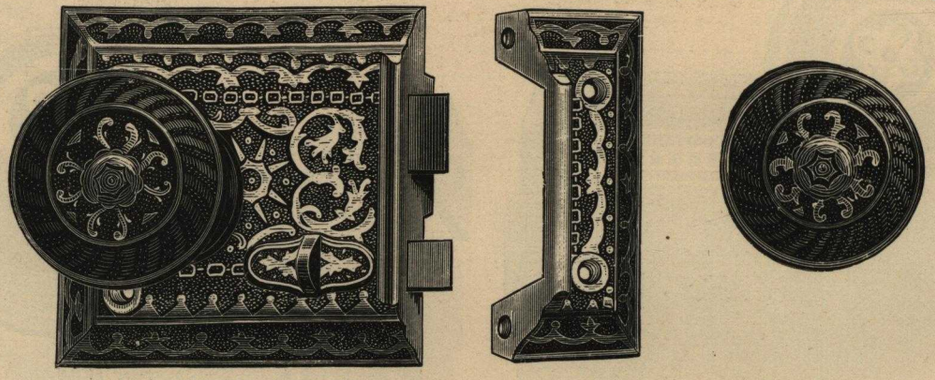
SALOON LOCKS AND LATCHES.



SALOON LOCK. Size, 4⅛ x 4½ Inches.

No. 27 Bronze, Niles' Patent.....Each, $5 00

No. 27 Plated, Niles' Patent ....Each, $6 50



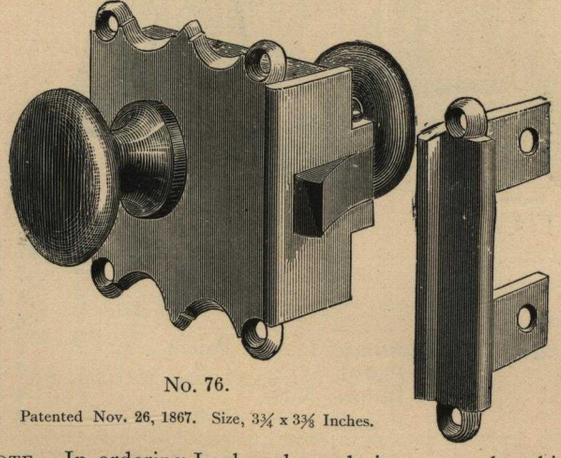
SALOON LATCH. Embossed, L. & P. Patent. Size, 4⅛ x 4½ Inches.

No. 29 Bronze, L. & P. Patent.....Each, $7 25

29 Plated, " " ..... " 7 25

No. 29 Bronze, Niles' Patent.....Each, $4 50

29 Plated, " " ..... " 6 00



No. 76.

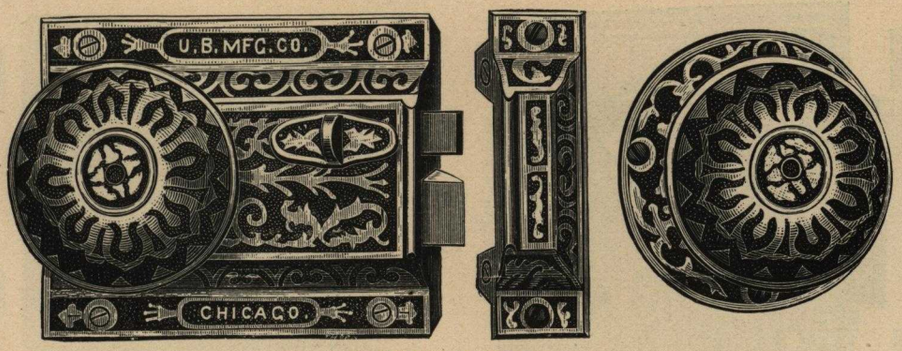
Patented Nov. 26, 1867. Size, 3¾ x 3⅜ Inches.

SALOON LATCH.

		Each.
No. 76	Brass, Half Mortise Swing Bolt....	$6 00
76	Plated, " " " "	7 25
76	" " with Flush Handle,	7 50

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

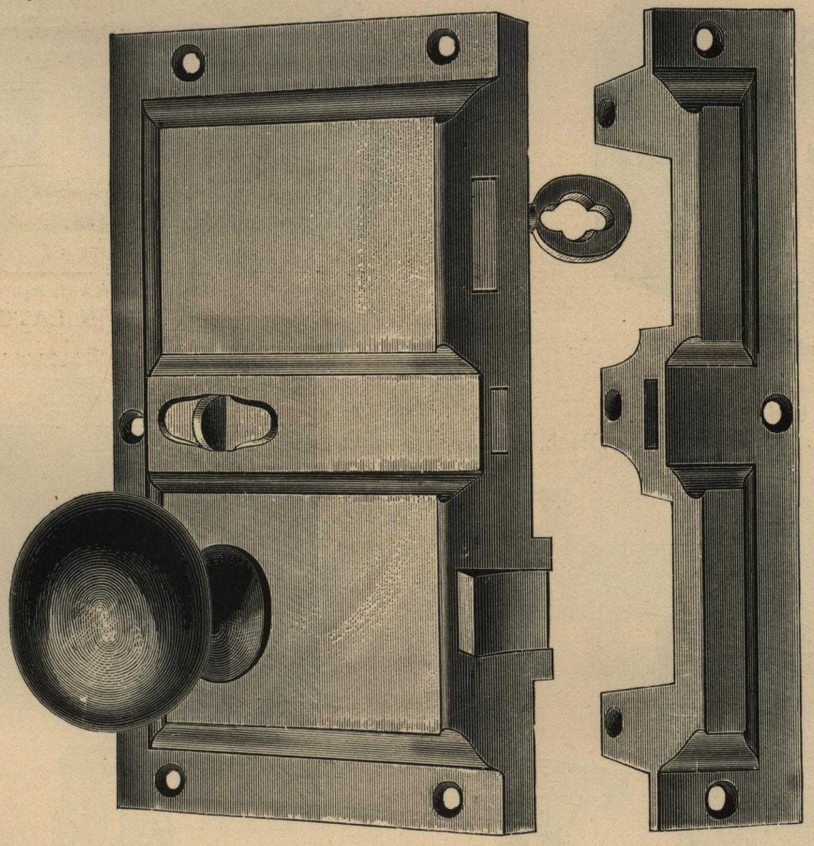
SALOON LOCKS AND LATCHES.



SALOON LATCH.

L. & P. Patent. Size, 3⅜ x 4⅛ Inches.

No. 77	L. & P. Patent, Bronze	Each,	$7 25
77	" " Iron Bronze and Iron Bronze Knobs	"	4 50
77	Niles' " " " " "	"	3 00
77	" " " " Bronze Knobs	"	3 50
77	" " Bronze and Bronze Knobs	"	4 50



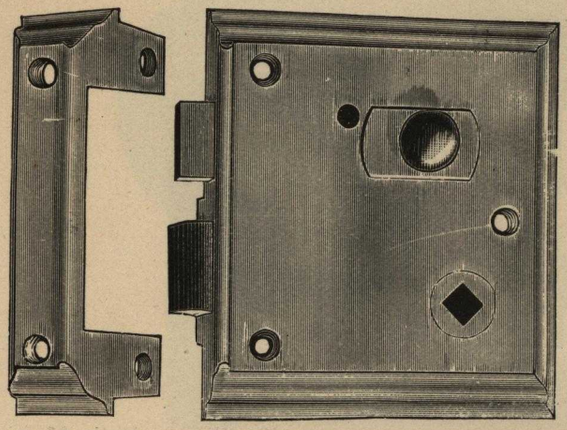
SALOON LATCH AND LOCK, WITH SLIDE BOLT.

Patented Nov. 26, 1867. Size, 4⅛ x 7¼ Inches.

No. 86	L. & P. Patent, Brass	Each,	$8 50
86	" " Plated	"	10 50

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

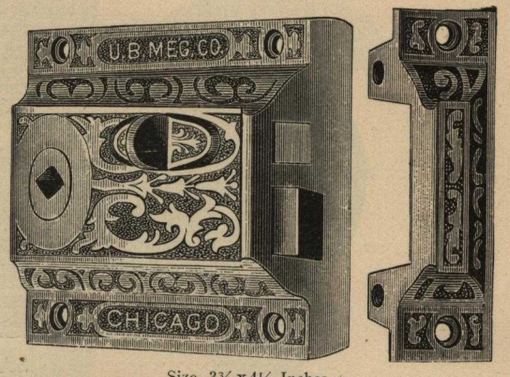
SALOON LOCKS AND LATCHES.



Size, 3¾ x 4¼ Inches.

SALOON LOCK.

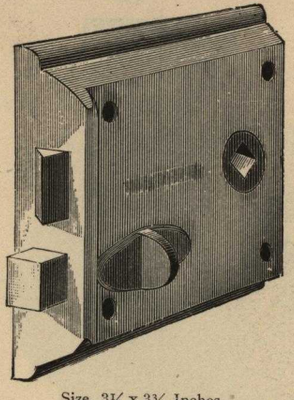
No. 34	Brass	Each,	$3 40
34	Plated	"	4 50



Size, 3⅜ x 4⅛ Inches.

SALOON LATCH.

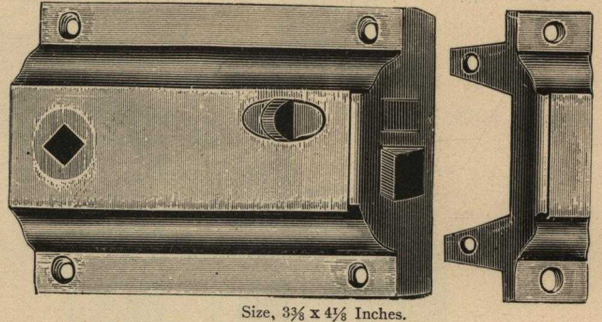
No. 64	Without Knobs, Bronze	Each,	$4 50
64	" Plated	"	4 50



Size, 3¼ x 3¾ Inches.

SALOON LATCH.

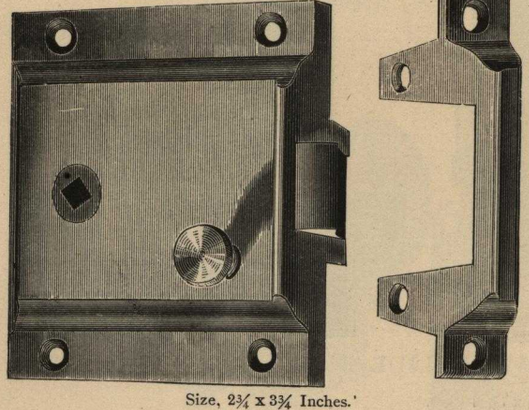
No. 73	Brass	Each,	$2 75
73	Plated	"	3 75



Size, 3⅜ x 4⅛ Inches.

SALOON LATCH.

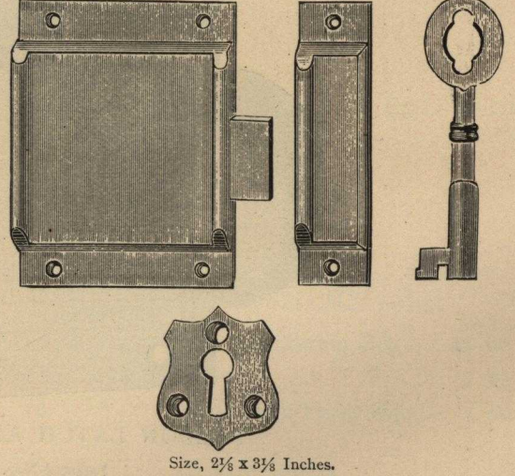
No. 75	Brass	Each,	$2 75
75	Plated	"	3 75
75	Iron	"	2 25



Size, 2¾ x 3¾ Inches.

SALOON LATCH.

No. 92	Swing Bolt, Brass	Each.	$3 00
92	" Plated	"	4 25



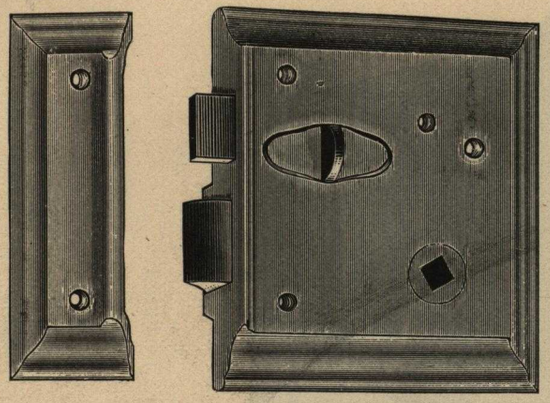
Size, 2⅛ x 3⅛ Inches.

SALOON LOCK

No. 93	Brass	Each,	$2 25
93	Plated	"	2 75

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

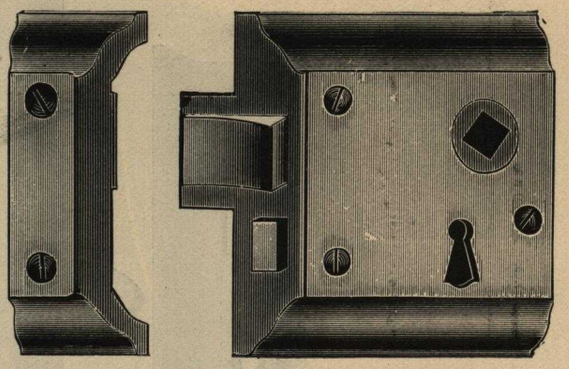
MISCELLANEOUS LOCKS AND LATCHES.



SALOON LOCK.

Size, 3¼ x 3⅞ Inches.

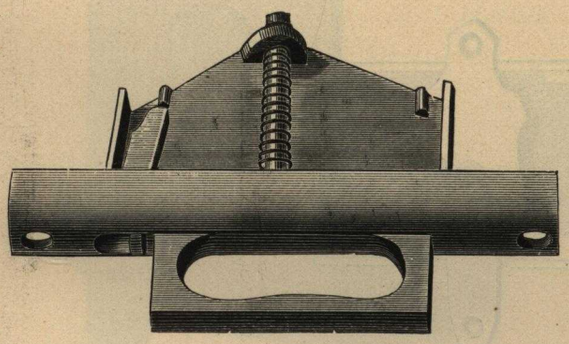
No. 100	Japanned	Each, $2 50
100	Brass	" 3 00
100	Plated	" 4 00



STATE ROOM DOOR LOCK.

Size, 3⅜ x 3⅞ Inches.

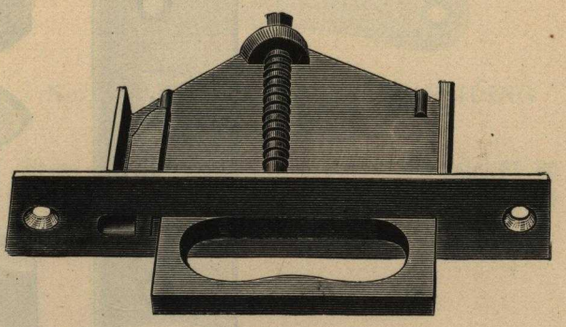
No. 99	With Swing Latch, Brass	Each, $3 20
99	" " Plated ...	" 4 20



SLIDING DOOR PULL.

Round Face. Size, 2⅞ x 4½ Inches.

No. 96	Brass	Each, $2 00
96	Plated	" 2 25



SLIDING DOOR PULL.

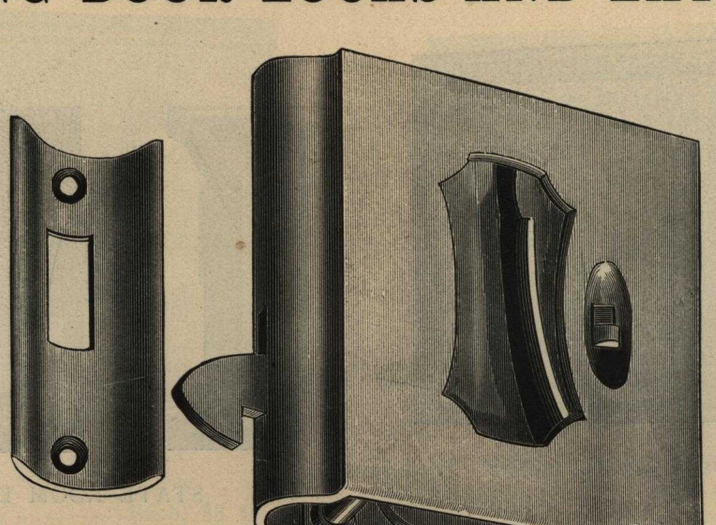
Square Face. Size, 2⅞ x 4½ Inches.

No. 98	Brass	Each, $2 00
98	Plated	" 2 25

*In ordering Sliding Door Pulls, please state whether for round or square edge door, and also give thickness of same.

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

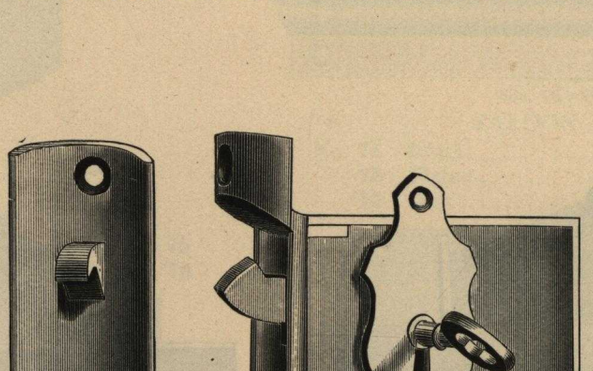
SLIDING DOOR LOCKS AND LATCHES.



SLIDING DOOR LATCH.

Round Face. Size, 4½ x 4⅜ Inches.

No. 94 Brass ..... Each, $5 75
94 Plated ..... " 6 75



SLIDING DOOR LOCK.

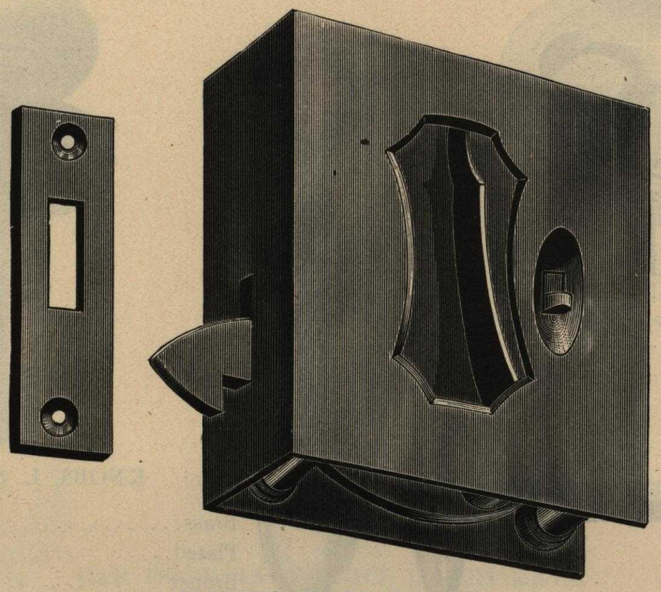
Round Face. Size, 3⅞ x 3¾ Inches.

No. 95 Brass ..... Each, $4 25
95 Plated ..... " 4 75

In ordering Sliding Door Locks and Latches, please state whether for round or square edge doors, and also give thickness of same.

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

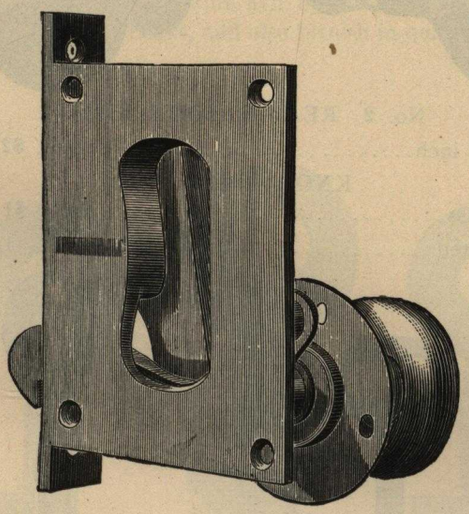
SLIDING DOOR FIXTURES.



SLIDING DOOR LATCH.

Square Face. Size, 4½ x 4⅜ Inches.

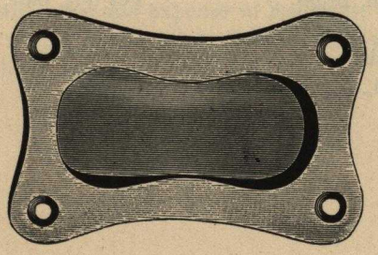
No. 97	Brass	Each, $5 75
97	Plated	" 6 75



SLIDING DOOR LATCH.

Patented Nov. 26, 1867. Size, 3⅝ x 5⅝ Inches.

No. 80	Brass	Each, $5 50
80	Plated	" 6 50
80	Plated, with Flush Handle	" 6 75



No. 2 FLUSH HANDLE, FOR SLIDING DOOR.

Brass		Per pair, $1 85
Plated		" 2 25

SLIDING DOOR SPRING.

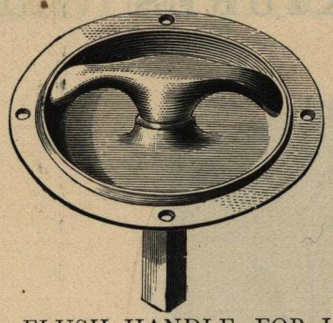
Size, 1½ x 4 Inches.

Brass		Each, $0 14
Plated		" 18

In ordering Sliding Door Latches, please state whether for round or square edge doors, and also give thickness of same.

NOTE.—In ordering Locks, please designate number, kind and material, that orders may be executed correctly.

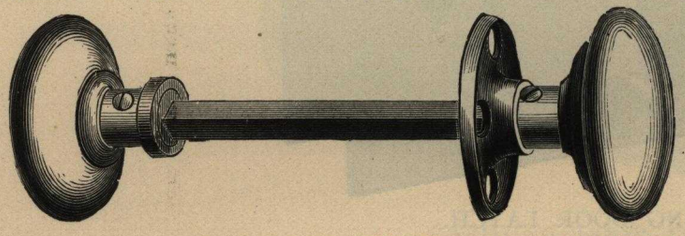
KNOBS, FLUSH HANDLES AND KEYS.



No. 1. FLUSH HANDLE, FOR LOCKS.

Patented Nov. 26, 1867.

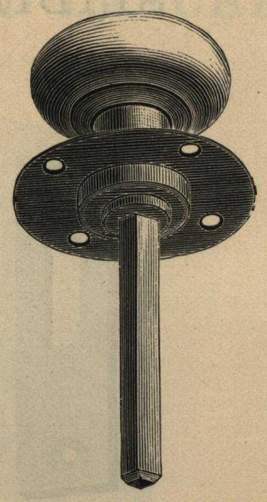
Brass..... Each, $2 70
Plated..... " 3 00



No. 1. CAR DOOR KNOBS.

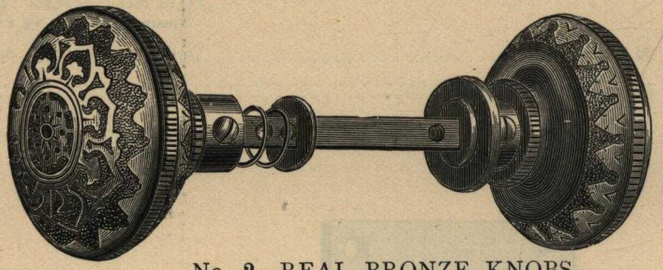
Extra Heavy.

2⅛ inch, Brass..... Per doz. pair, $16 00
2⅛ " Plated..... " 32 00
Porcelain..... " .....
Mineral..... " .....



KNOBS, L. & P. PATENT.

Brass..... Per pair, $4 25
Plated..... " 5 00
Bronze..... " 5 00

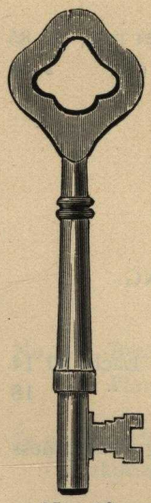


No. 2 REAL BRONZE KNOBS.

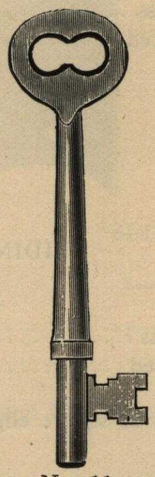
2¼ inch..... Per pair, $2 75

KNOB RECEIVERS.

Brass..... Each, $1 00
Plated..... " 1 35



No. 10.



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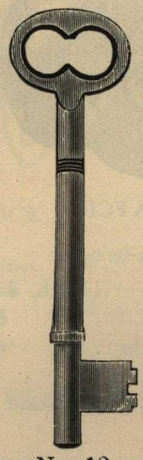

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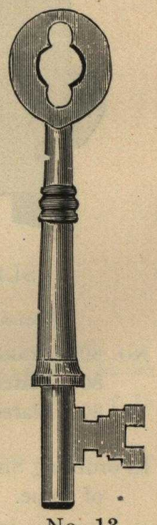
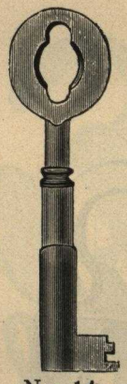


No. 13.

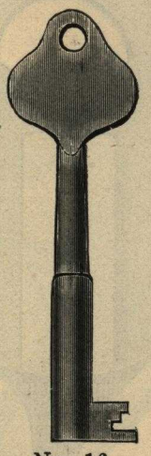
For prices of above Keys, see page 107.

COACH DOOR, CAR AND SWITCH KEYS.



No. 14.

No. 15.



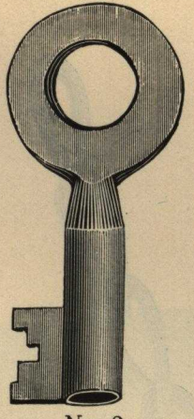
No. 16.

CAR DOOR AND NIGHT LATCH KEYS.

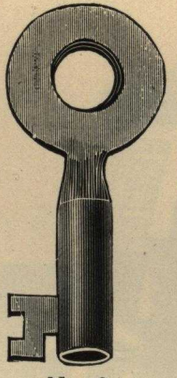
Brass	Each,	$0 30
R. & E. Patent Steel	"	1 00
With Steel Bit	"	38
Night Latch, Brass	"	30

The constant breakage of Coach Keys having been a source of annoyance and expense to Railways, we have endeavored to meet this evil by manufacturing a Forged Steel Key, which, as far as possible, we send with our better class of Locks, and also furnish in quantities at prices but very little over that of the Brass.

No. 1.



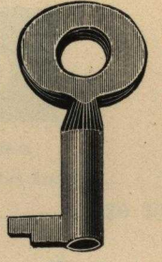
No. 2.



No. 3.

No. 4.

No. 5.



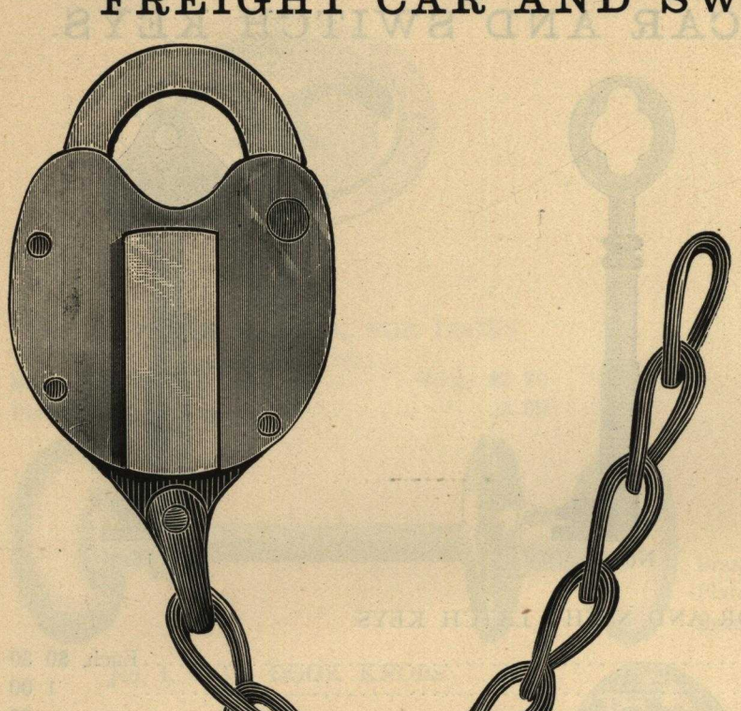
No. 6.

SWITCH AND CAR KEYS.

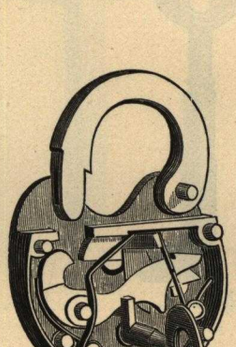
Car Keys	Per doz.	$2 50
Switch Keys	"	2 25

We also make Forged Steel Switch and Car Keys when desired.

FREIGHT CAR AND SWITCH LOCKS.

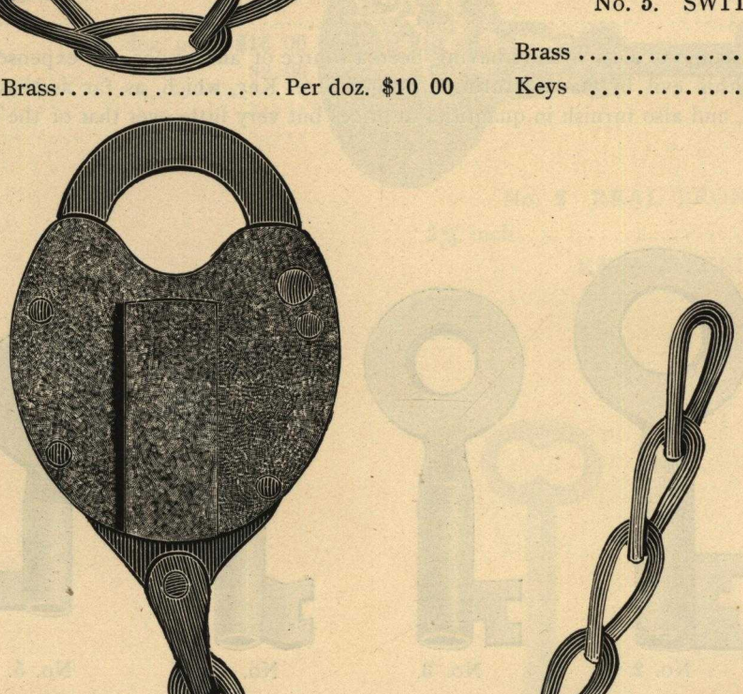


No. 7 Switch Lock, Brass.....Per doz. $10 00



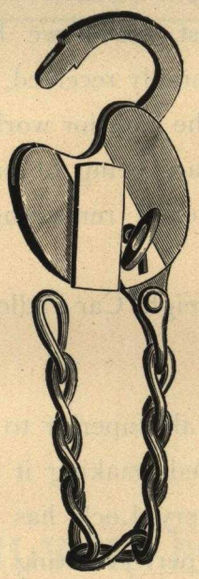
No. 5. SWITCH LOCK.

Brass .....Per doz. $10 00
Keys ..... " 2 25



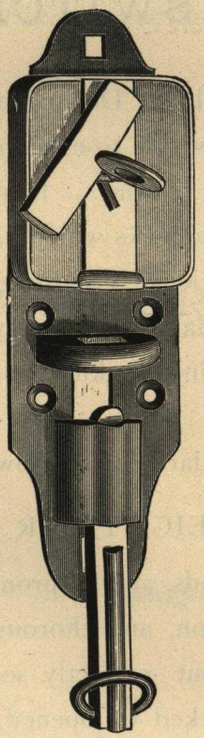
No. 7 Switch Lock, Rough Finish .....Per doz. $7 50

FREIGHT CAR AND SWITCH LOCKS.



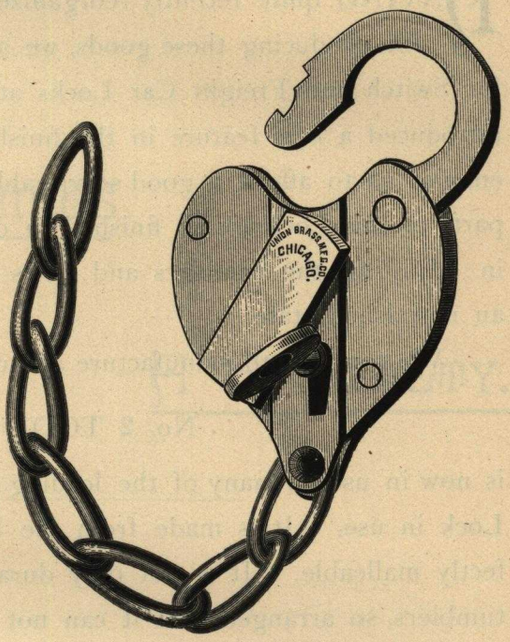
No. 5 SWITCH LOCK.

Brass.....Per doz. $10 00
Rough Finish, " 7 50
Keys..... " 2 25



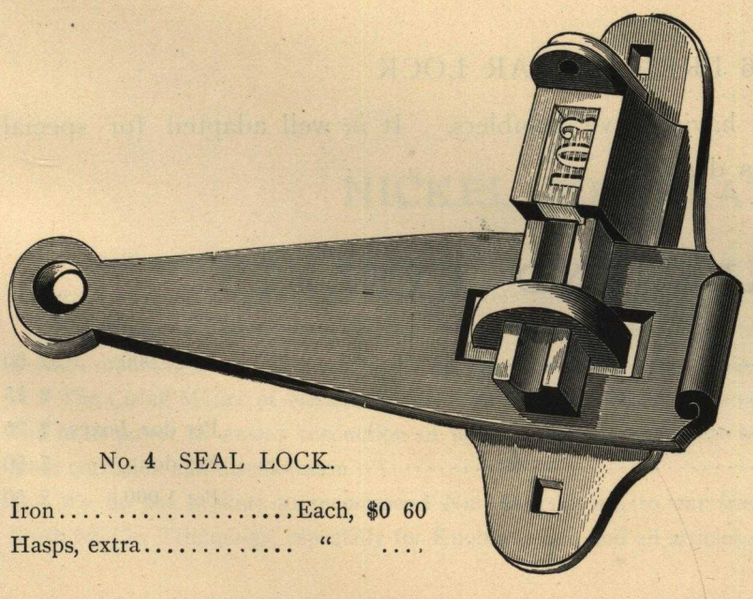
No. 2.
FREIGHT CAR LOCK.

Iron.....Each, $1 25
Brass..... " 1 50
Keys.....Per doz. 2 50



No. 6 FREIGHT CAR LOCK.
Extra Large.

Brass.....Each, $1 00
Rough Finish..... " 75
Keys.....Per doz. 2 50



No. 4 SEAL LOCK.

Iron.....Each, $0 60
Hasps, extra..... " ....

GLASS SEALS.

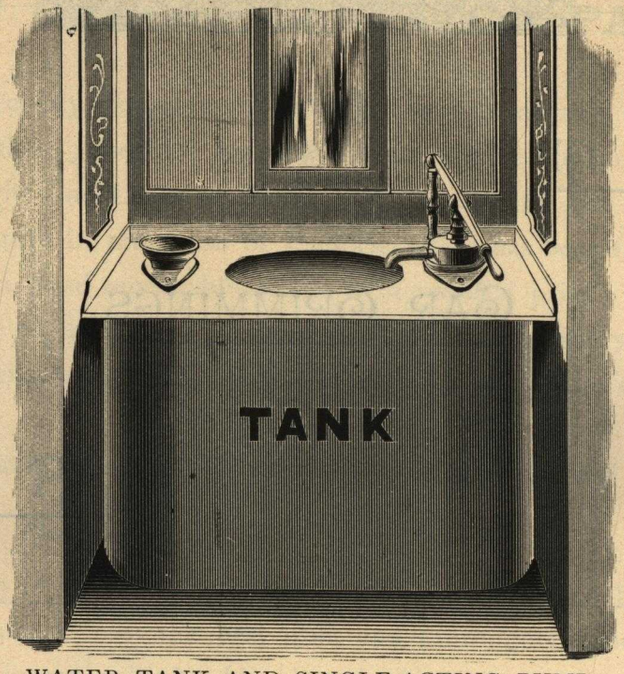
105

Size, ⅝ x 1¼ Inches.
FOR NO. 3 FREIGHT CAR LOCK.
Per 100.....$0 30

106

Size, ½ x 1 Inch.
FOR NO. 4 SEAL LOCK.
Per 100.....$0 25

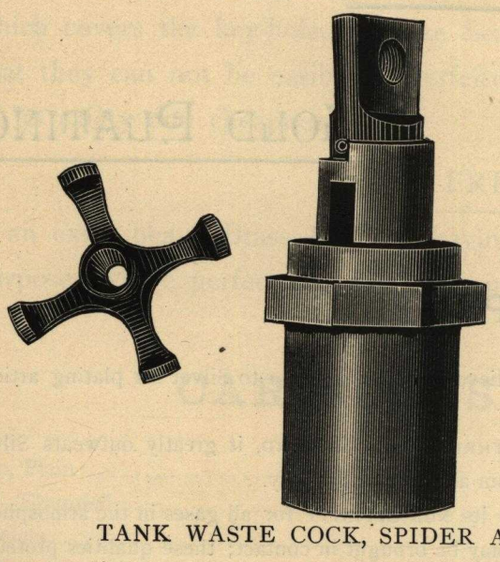
PUMP AND TANK FIXTURES.



WATER TANK AND SINGLE-ACTING PUMP.

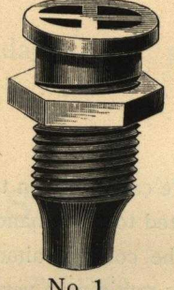
No. 1	Pump, complete,	Lever	Handle,	Brass	Each,	$20 00
1	"	"	"	Plated	"	22 50
2	"	"	T	Brass	"	16 75
2	"	"	"	Plated	"	18 00
Tank, complete					"	20 00
Cast Iron Top for Marble Slab, 31½ x 20 inches					"	6 00
"	"	"	23 x 20	"	"	5 00

Marble Slabs of any size made to order.



TANK WASTE COCK, SPIDER AND WRENCH.

Brass.....Per set, $3 25



No. 1.
MARBLE DRIP COUPLING.

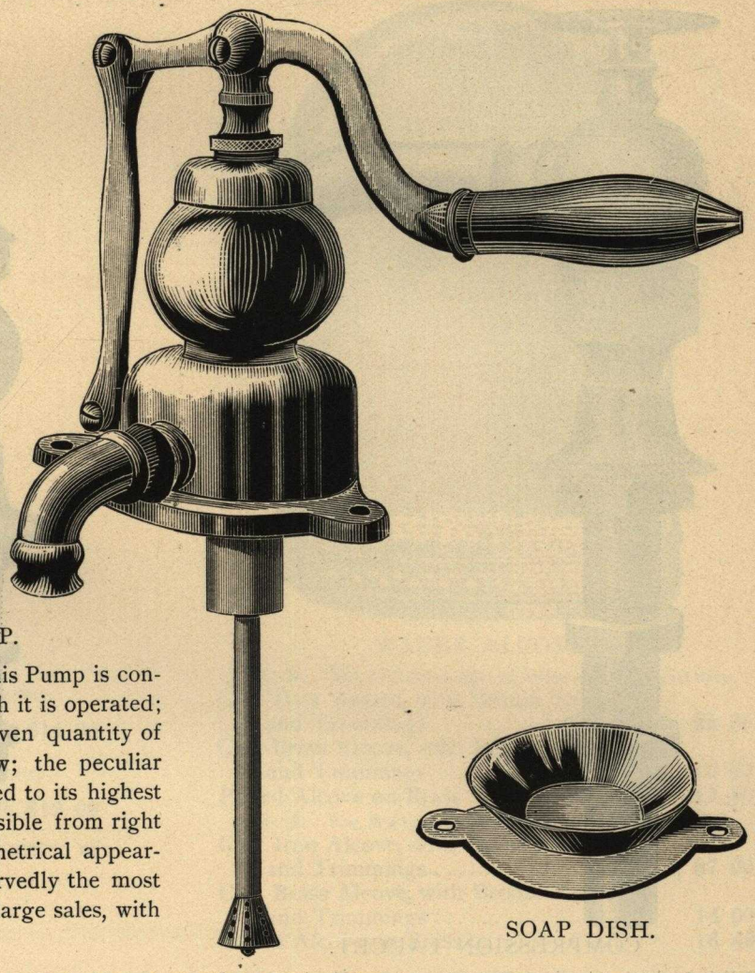
Brass.....Each, $0 80
Plated..... " 90

TANK BANDS.

30 inch, Plated.....Each, $1 60

30 inch, Brass .....Each, $1 40

PUMP AND TANK FIXTURES.



DOUBLE-ACTING PUMP.

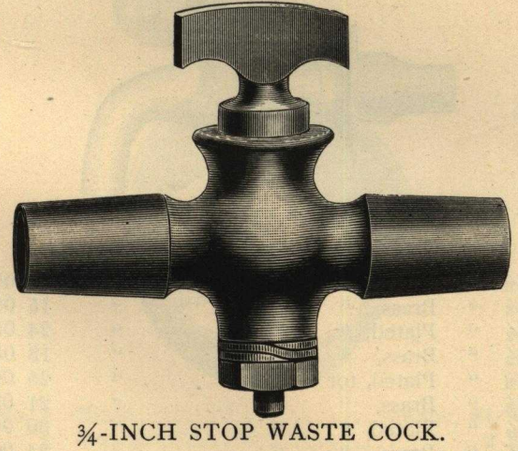
The very substantial manner in which this Pump is constructed; the ease and facility with which it is operated; the rapidity with which it will throw a given quantity of water, giving a steady and constant flow; the peculiar merit of its not splashing even when forced to its highest capacity; and the point of its being reversible from right to left, or left to right; as well as its symmetrical appearance, have all combined to make it deservedly the most popular Pump in use, and gained for it large sales, with increasing demands.

SOAP DISH.

PUMP, COMPLETE, LEVER HANDLE.

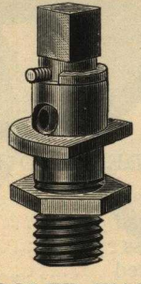
No. 3 Brass.....Each, **$20 00** No. 3 Plated.....Each, **$22 50** No. 3 Bronze....Each, **$22 50**

NOTE.—LEIGHTON PUMP (Double-Acting)—We are the sole manufacturers of this Pump, which is so constructed, that, when room is limited, or when it is desirable that no mechanism should appear on top of slab of washstand, it can be readily applied beneath, only the outlet or spout being visible above the slab; no other part of Pump is shown except the lever, which is in front and below top of stand. Price, same as for No. 3 Pump.



¾-INCH STOP WASTE COCK.

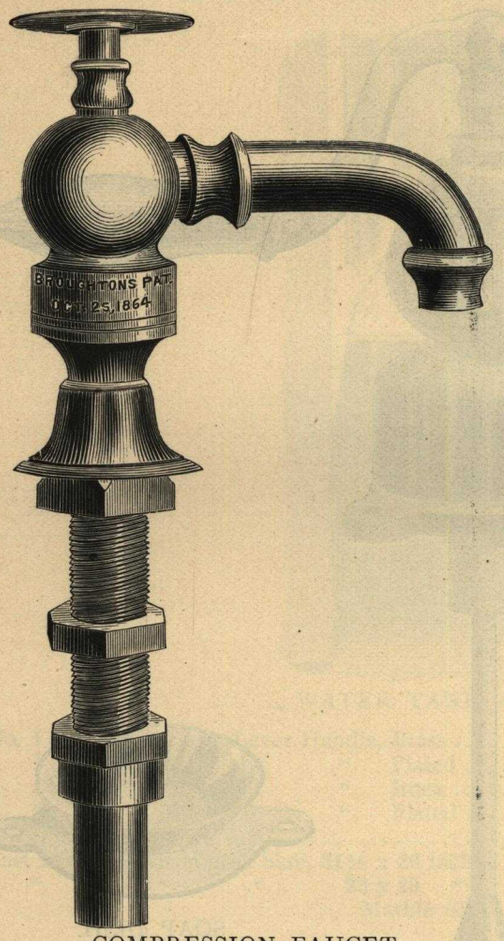
Brass.....Each, **$1 70**



WATER COOLER WASTE COCK.

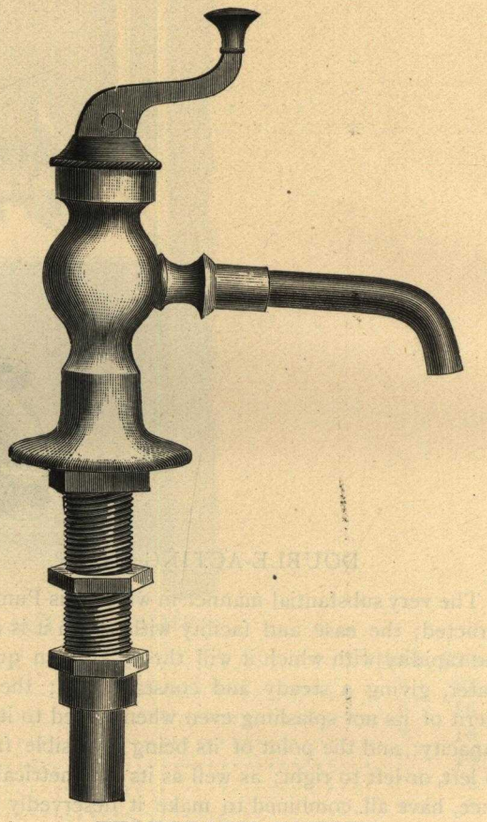
Brass.....Each, **$0 90**

FAUCETS.



COMPRESSION FAUCET.

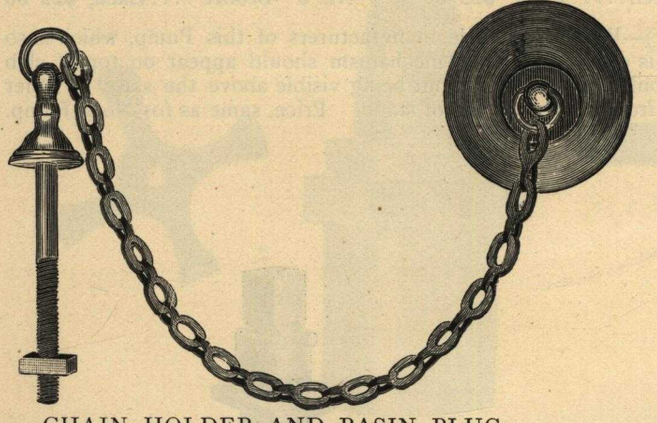
With ½ inch opening,	Brass.....	Each,	$4 25
" " "	Plated.....	"	5 00



TELEGRAPH FAUCET.

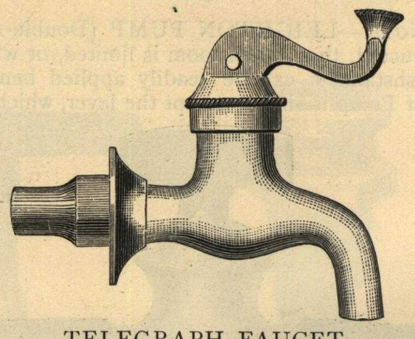
(LEVER FAUCET OR COCK.)

With ½ inch opening,	Brass.....	Each,	$3 00
" " "	Plated.....	"	3 50



CHAIN HOLDER AND BASIN PLUG.

Chain Holder,	Brass.....	Each,	$0 60
"	Plated.....	"	75
Basin Plugs,	Brass.....	"	85
"	Plated.....	"	1 00
Basin Chain,	Brass.....	Per foot,	17
"	Plated.....	"	20

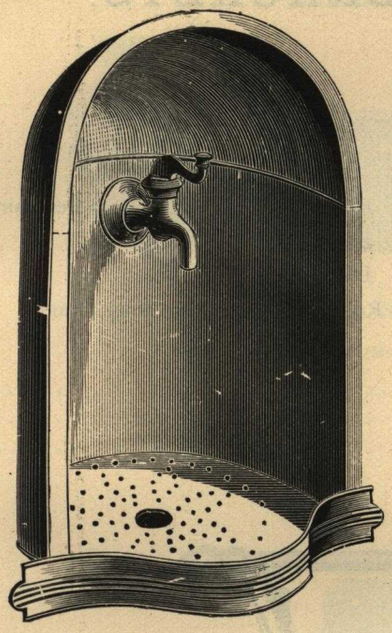


TELEGRAPH FAUCET.

(HORIZONTAL TELEGRAPH COCK OR FAUCET.)

⅜ inch,	Plated, for Water Coolers..	Per doz.	$20 00
⅜ "	Brass, " " ..	"	15 00
½ "	Plated, " " ..	"	24 00
½ "	Brass, " " ..	"	18 00
⅜ "	Plated, for Alcoves.....	"	25 00
⅜ "	Brass, " "	"	21 00
½ "	Plated, " "	"	30 00
½ "	Brass, " "	"	24 00

WATER ALCOVES.



WATER ALCOVE.

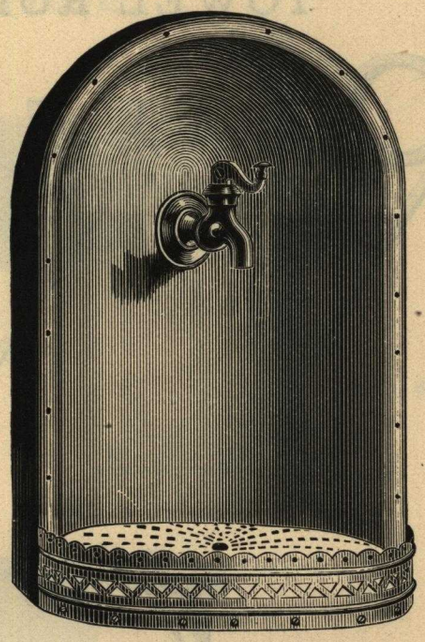
No. 1. Size, 12 inches high, 8 inches wide, 4 inches deep.

Alcove, with Faucet, complete, Plated. Each, **$14 00**

No. 2. Size, 9 inches high, 6 inches wide, 3 inches deep.

Alcove, with Faucet, complete, Plated. Each, **$12 00**

If to be used on round panel, give diameter of circle.



WATER ALCOVE.

No. 3. Size, 13¼ inches high, 8¼ inches wide, 5¼ inches deep.

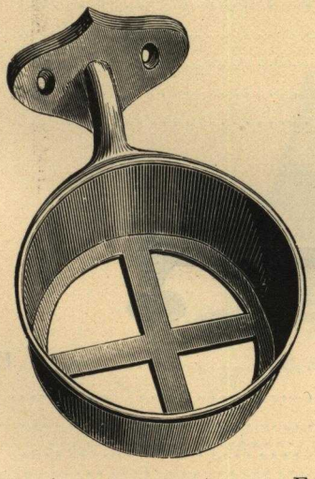
Cast Iron Alcove, with Bronze Faucet and Trimmings	Each,	$8 00
Cast Brass Alcove, with Bronze Faucet and Trimmings	Each,	$15 00
Plated Alcove on Brass	"	17 50

No. 4. Size, 11¼ inches high, 6⅞ inches wide, 4½ inches deep.

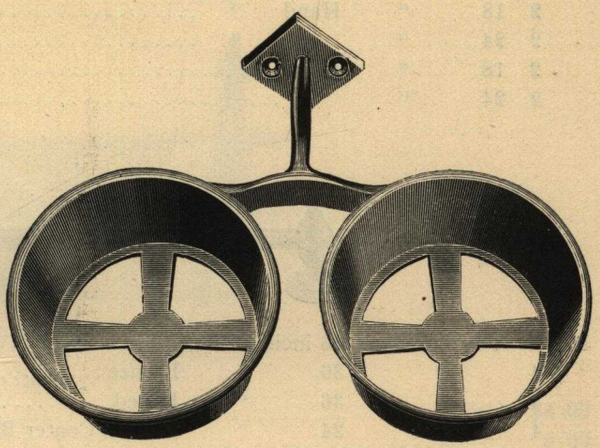
Cast Iron Alcove, with Bronze Faucet and Trimmings	Each,	$7 00
Cast Brass Alcove, with Bronze Faucet and Trimmings	"	14 00
Plated Alcove on Brass	"	16 50

If to be used on round panel, give diameter of circle.

CUP OR TUMBLER HOLDERS.

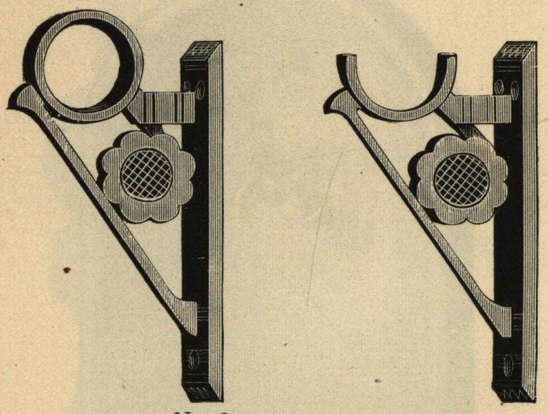


No. 1	Brass	Each,	$1 90
1	Bronze	"	2 25
1	Plated	"	2 25



No. 2	Brass	Each,	$2 75
2	Bronze	"	3 25
2	Plated	"	3 25

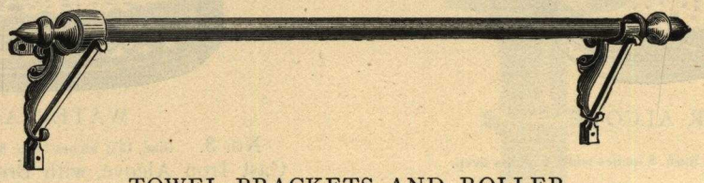
TOWEL RODS AND BRACKETS.



No. 3 TOWEL BRACKETS.

TOWEL BRACKETS.

No. 3	Brass	Per pair,	$1 00
3	Bronze	"	1 25
3	Plated	"	1 25
Towel Rollers, Wood, 24 in. long		Each,	25

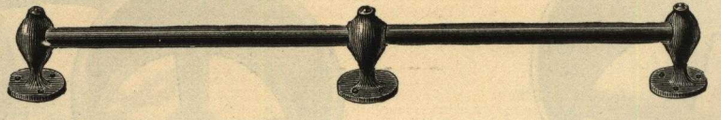


TOWEL BRACKETS AND ROLLER.

No. 1	Towel Brackets, Brass	Per pair,	$0 70
1	" " Plated	"	85
Towel Rollers, Wood, 24 inches long		Each,	25

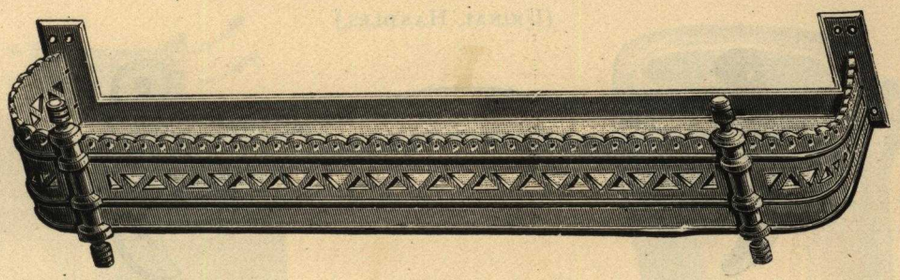
TOWEL ROD.

No. 2	18 inches long, Nickel Plated	Each,	$2 00
2	24 " " "	"	2 40
2	18 " Hand "	"	2 40
2	24 " " "	"	3 00
2	18 " Brass	"	2 00
2	24 " "	"	2 40



No. 4	Towel Rollers, 36 inches long, Brass	Each,	$3 00
4	" 36 " Bronze	"	4 00
4	" 36 " Plated	"	4 00
4	" 24 " without Center Bracket, Brass	"	2 00
4	" 24 " " " Bronze	"	3 75
4	" 24 " " " Plated	"	3 75

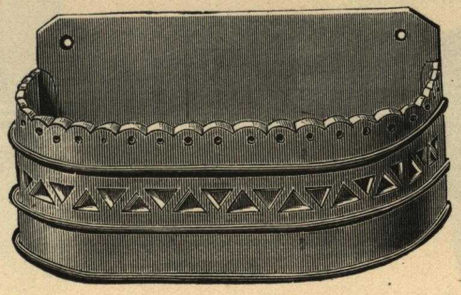
TOILET FIXTURES.



No. 1 TOWEL RACK.

(MINOR GUARD). Size, 19 x 4¼ Inches.

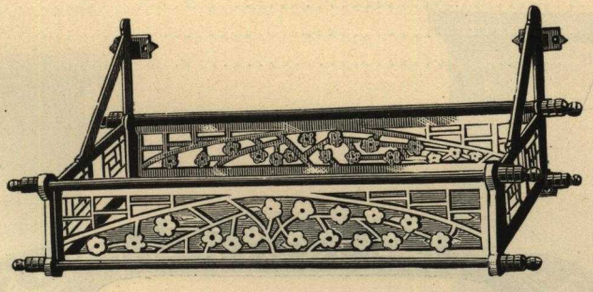
Brass	Each,	$5 50
Bronze	"	7 00
Plated	"	7 00



No. 2 COMB AND BRUSH RACK.

Size, 6½ x 3½ Inches.

Brass	Each,	$3 00
Bronze	"	4 00
Plated	"	4 00



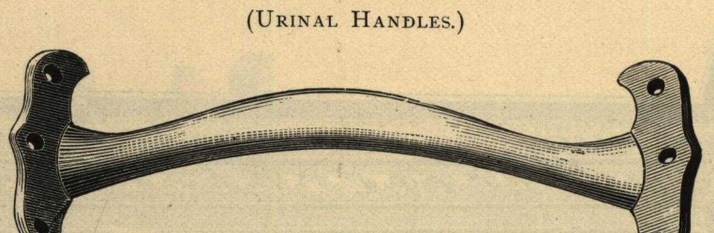
No. 4 COMB AND BRUSH RACK.

Size, 10 x 4 Inches.

Brass	Each,	$4 00
Bronze	"	5 00
Plated	"	5 00

SALOON HANDLES.

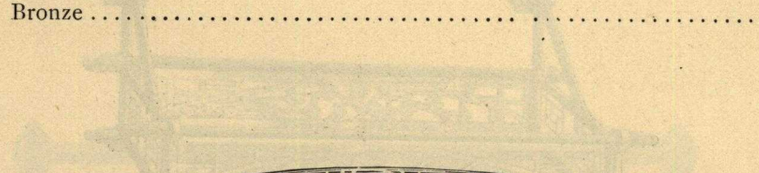
(URINAL HANDLES.)



No. 1 Corner Handle, Brass ..... Each, $1 00
1 " " Plated ..... " 1 15
2 Side " Brass ..... " 1 00
2 " " Plated ..... " 1 15

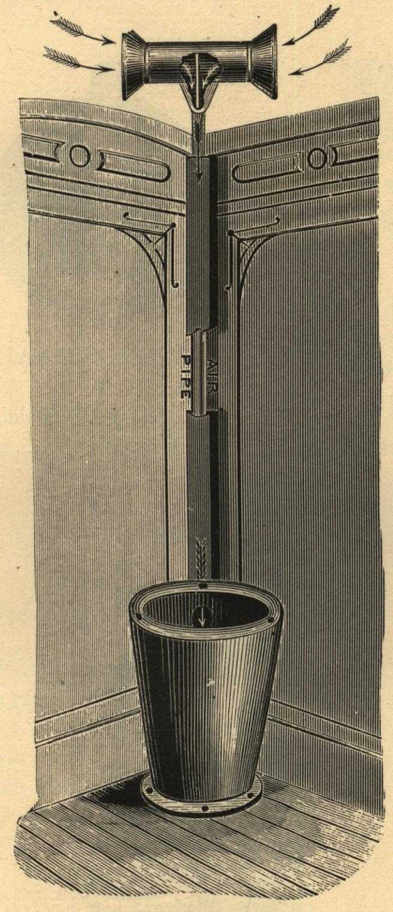
No. 3 Corner Handle, Bronze ..... Each, $1 15

No. 4 Side Handle, Brass ..... Each, $1 00
4 " " Plated ..... " 1 15
4 " " Bronze ..... " 1 15



No. 7 Side Handle, Bronze ..... Each, $1 15
7 " " Plated ..... " 1 15

SALOON HOPPERS.

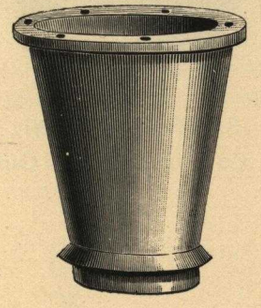


HOPPER AND WIND SCOOP.

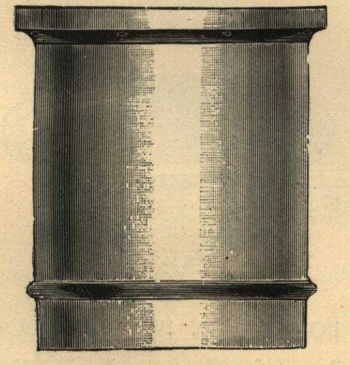
(VENTILATOR SACK.)

Wind Scoop for top of car ..... Each, **$1 25**
Hopper and Pipe, extra ..... " ....

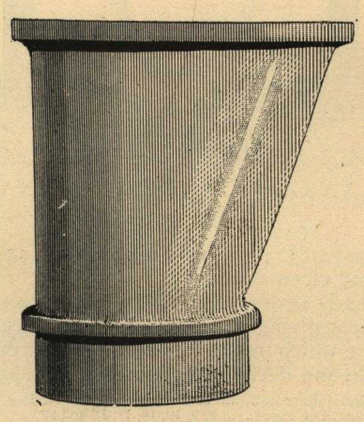
No. **7** U. B. Co's Porcelain, for Wind Scoop ..... Each, **$6 00**
5 Springfield Iron, Enameled ... " **3 50**



No. **3** U. B. Co's Porcelain, Plain ... Each, **$5 25**

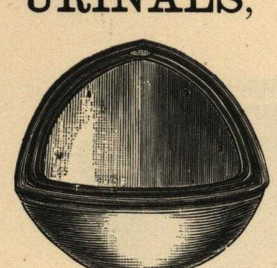


No. **6** U. B. Co's Porcelain, Plain ... Each, **$5 00**



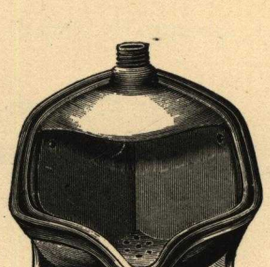
No. **8** U. B. Co's Porcelain, Plain ... Each, **$5 50**

URINALS, DRIP PANS AND WASH BOWLS.



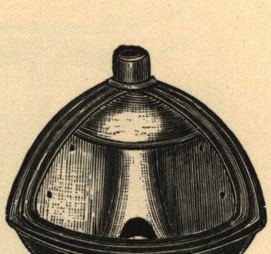
SALOON URINAL.

		Each.
No. 6	U. B. Co's Porcelain, Plain	$4 00
9	U. B. Co's Enameled	2 50
5	U. B. Co's Iron, Enameled	2 50



SALOON URINAL.

		Each.
No. 9	U. B. Co's Porcelain Ventilating, with Front Projection	$4 50

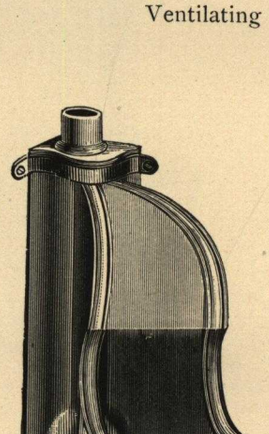


SALOON URINAL.

		Each.
No. 7	U. B. Co's Porcelain Ventilating	$4 50

SALOON URINAL.

No. 8 U. B. Co's Porcelain, with Cap. Each, $4 25



SALOON URINAL.

No. 10 U. B. Co's Porcelain Ventilating..... Each, $6 00

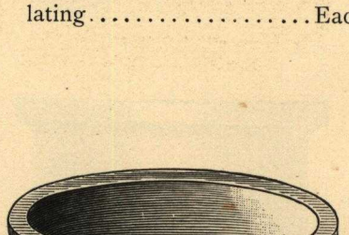
LAWRENCE PATENT URINAL DRIP PANS.

A necessity to those who would have an odorless saloon and clean floor.

For nearly seven years these have been used on many roads, giving entire satisfaction. By use of the short pipe which passes through the floor of the car, saturation and decay of the wood-work is prevented.

Size of Pans.....12 x 12, 15 x 15, 9 x 14, 10 x 14.
Length of Pipes.....8, 9, 10, 16, 17, 18 and 20 inches.

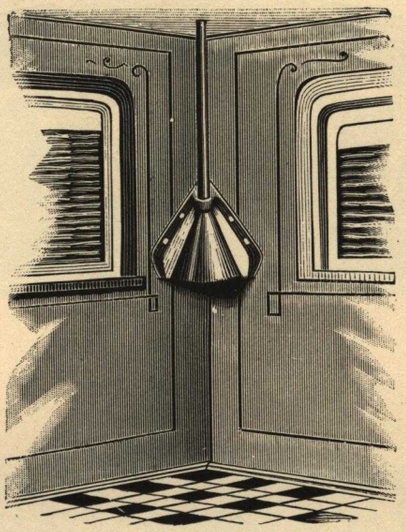
Drip Pans, Porcelain	Each,	$4 00
Pipes for same	"	1 00
Floor Pipes	"	75



PORCELAIN WASH BOWLS.

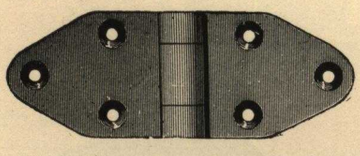
13 inch,	Patent Overflow	Each,	$2 00
"	Common "	"	1 75
"	No "	"	1 50

UNIVERSAL CORNER URINAL VENTILATOR CAP.



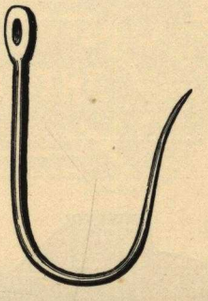
Porcelain ..... Each, $1 50

Very many coaches being already equipped with the ordinary open Urinal, we have introduced a Cap (for which patent has been applied), which can be attached to any ordinary sized Urinal, forming a hood and preventing in a great measure the escape of the objectionable gases so common to the ordinary open Urinal. We place them at the extraordinary low price of $1.50 each, hoping thus to put them within the reach of every road desiring pure air in the saloons of their cars.



SALOON HINGE.

No. 1 Brass..... Per pair, $1 00
1 Plated..... " 1 30



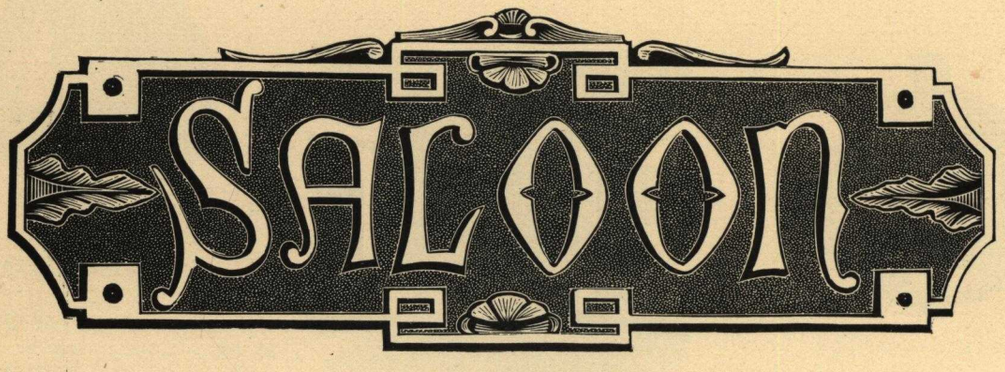
SALOON PAPER HOOK.

No. 1 Iron..... Each, $0 18

HOPPERS AND URINALS.

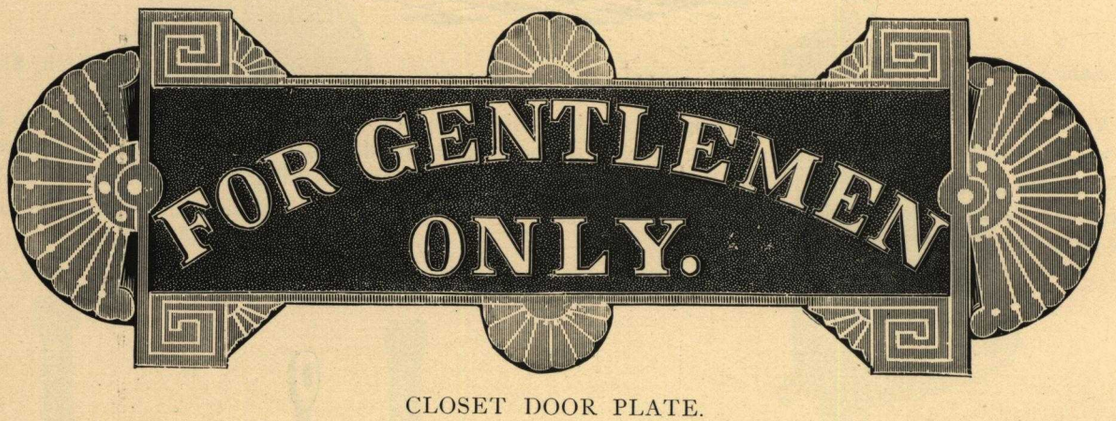
We believe that, by the use of our Ventilating Urinal and Hopper, together with a Wind Scoop running to the top of the car, almost, if not all, of the offensive odor natural to the saloon may be carried off, and the atmosphere left as pure as that in any portion of the car. We have, however, all grades of these goods, made of the strongest white earthenware, heavily enameled, so that they will retain their color indefinitely. We also offer the Patent Drip Pan.

NOTICE PLATES.



CLOSET DOOR PLATE.

No. 1	Bronze	Per doz.	$18 00
1	Plated	"	18 00



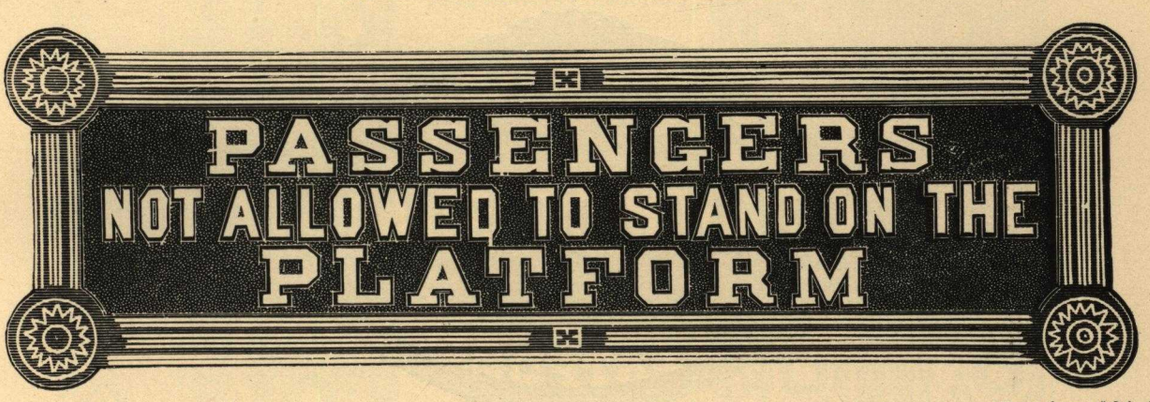
CLOSET DOOR PLATE.

No. 2	Bronze	Per doz.	$18 00
2	Plated	"	18 00

CLOSET DOOR PLATE.

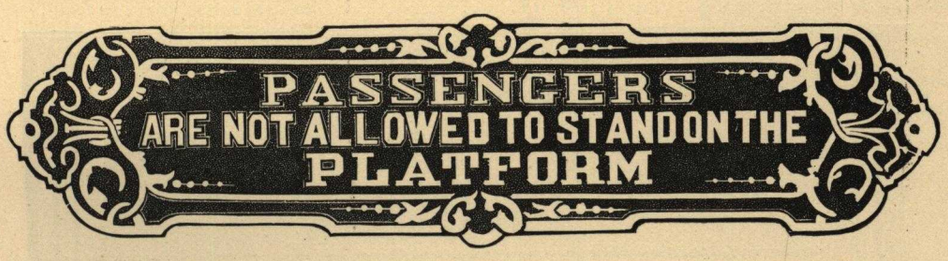
No. 3	Bronze	Per doz.	$18 00
3	Plated	"	18 00

NOTICE PLATES.



No. 4 Bronze ..... Per doz. $24 00
4 Plated ..... " 24 00

No. 5 Bronze ..... Per doz. $24 00
5 Plated ..... " 24 00



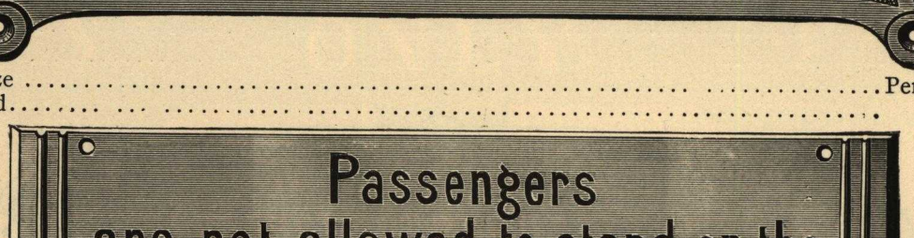
No. 6 Bronze ..... Per doz. $24 00
6 Plated ..... " 24 00

No. 7 Bronze ..... Per doz. $24 00
7 Plated ..... " 24 00

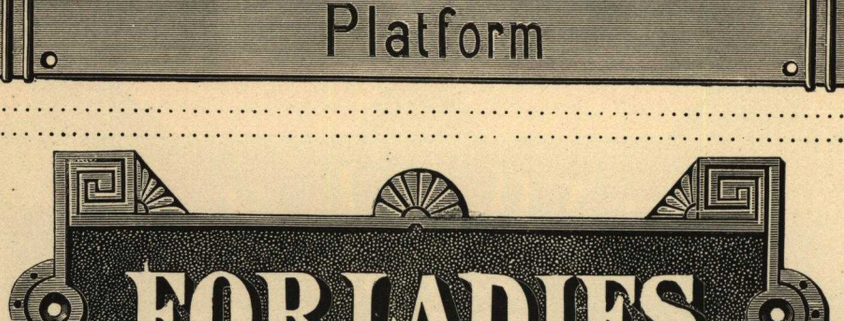
NOTICE PLATES.

No. 8 Bronze ..... Per doz. $24 00
8 Plated ..... " 24 00

No. 9 Bronze ..... Per doz. $24 00
9 Plated ..... " 24 00



No. 10 Bronze ..... Per doz. $24 00
10 Plated ..... " 24 00

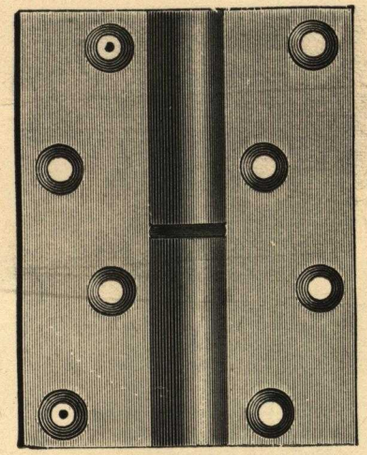


CLOSET DOOR PLATE.

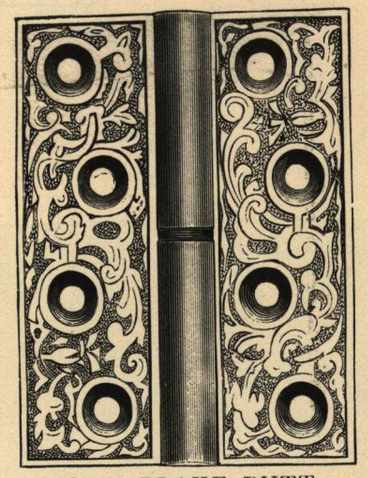
No. 11 Bronze ..... Per doz. $18 00
11 Plated ..... " 18 00

CAR DOOR BUTTS.

(LOOSE JOINT HINGES.)



No. 1 BLAKE BUTT.



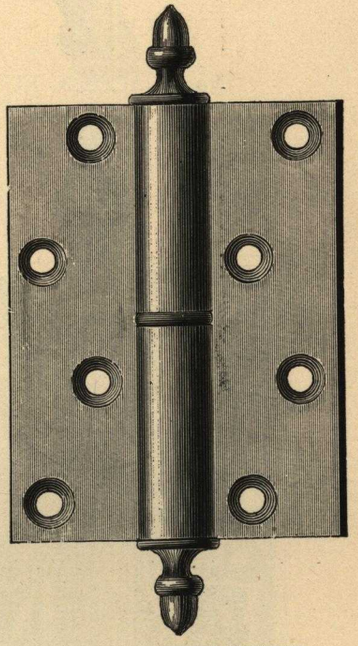
No. 2 BLAKE BUTT.

BLAKE BUTTS.

3¼ x 2⅜ inch,	Brass	Per dozen pairs,	$15	00
3¼ x 2⅜ "	Plated	" "	21	00
3¼ x 3 "	Brass	" "	18	00
3¼ x 3 "	Plated	" "	28	00
3½ x 3 "	Brass	" "	20	00
3½ x 3 "	Plated	" "	30	00
3½ x 3¼ "	Brass	" "	22	00
3½ x 3¼ "	Plated	" "	33	00
3½ x 3½ "	Brass	" "	24	00
3½ x 3½ "	Plated	" "	35	00
4½ x 3 "	Brass	" "	30	00
4½ x 3 "	Plated	" "	42	00

ACORN BUTTS.

3 x 2½ inch,	Brass	Per dozen pairs,	$19	00
3 x 2½ "	Plated	" "	27	00
3¼ x 2½ "	Brass	" "	20	00
3¼ x 2½ "	Plated	" "	28	00
3 x 3 "	Brass	" "	22	00
3 x 3 "	Plated	" "	31	00
3¼ x 3 "	Brass	" "	24	00
3¼ x 3 "	Plated	" "	33	00
3½ x 3 "	Brass	" "	25	00
3½ x 3 "	Plated	" "	34	00
3½ x 3¼ "	Brass	" "	27	50
3½ x 3¼ "	Plated	" "	37	00
3½ x 3½ "	Brass	" "	30	00
3½ x 3½ "	Plated	" "	40	00
4 x 3¼ "	Brass	" "	32	50
4 x 3¼ "	Plated	" "	43	00
4 x 3½ "	Brass	" "	35	00
4 x 3½ "	Plated	" "	46	00
4½ x 3 "	Brass	" "	38	00
4½ x 3 "	Plated	" "	48	00
4½ x 3¼ "	Brass	" "	42	00
4½ x 3¼ "	Plated	" "	54	00
5½ x 3¼ "	Brass	" "	48	00
5½ x 3¼ "	Plated	" "	62	00



No. 3 ACORN BUTT.

FAST JOINT BUTTS.

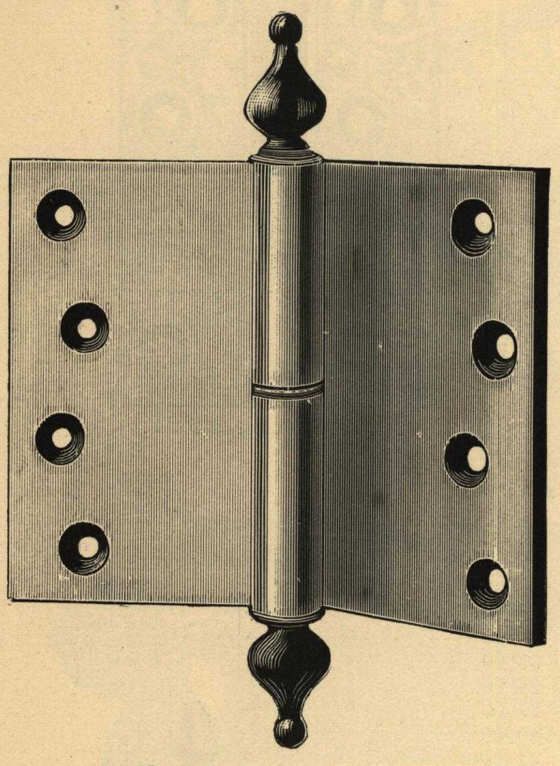
3 x 2 inch,	Bronze	Per dozen pairs,	$20	00
Small Sheet,	Brass	" "	4	80
"	Plated	" "	7	20

Discount..... Bronze Butts, corresponding sizes, same price as Plated.

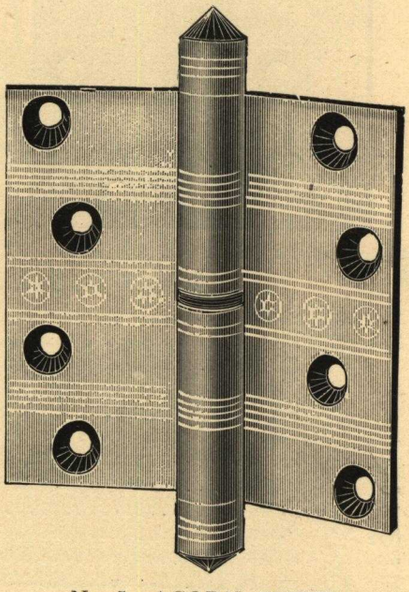
All the above have Steel Washers, and are made either right or left hand. Special sizes made to order and at advanced rates. For cuts showing styles of Car Door Butts, see pages Nos. 126, 127 and 128.

CAR DOOR BUTTS.

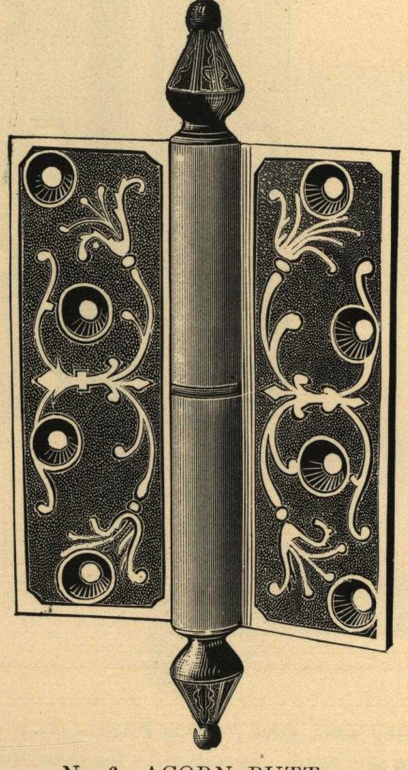
(LOOSE JOINT HINGES.)



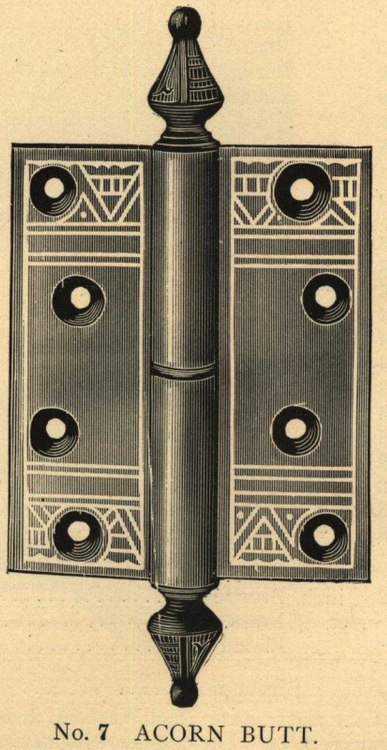
No. 4 ACORN BUTT.



No. 5 ACORN BUTT.



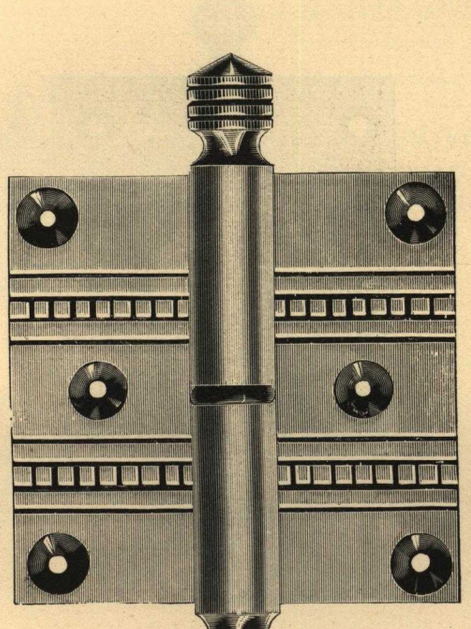
No. 6 ACORN BUTT.



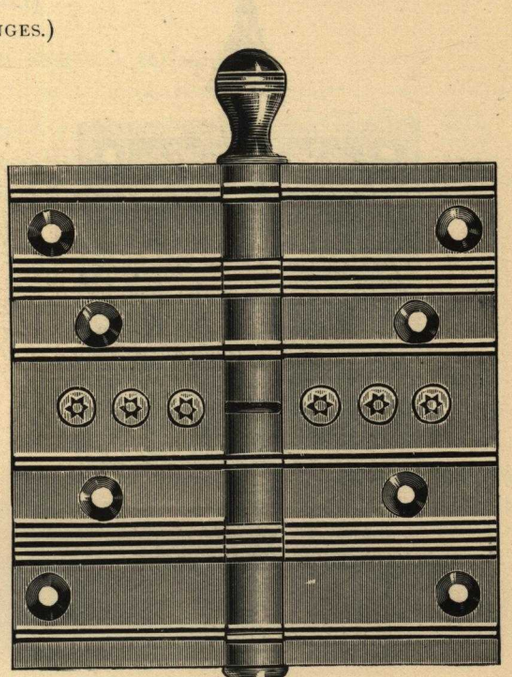
No. 7 ACORN BUTT.

CAR DOOR BUTTS.

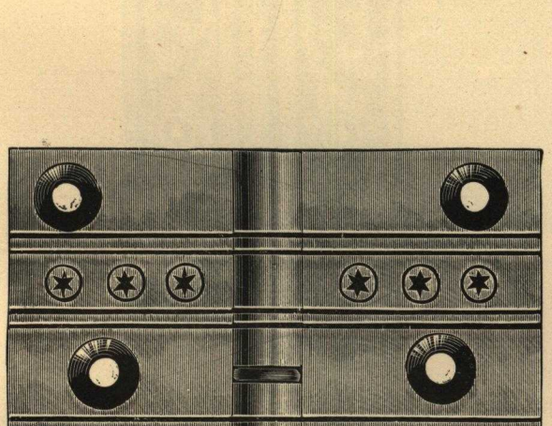
(LOOSE JOINT HINGES.)



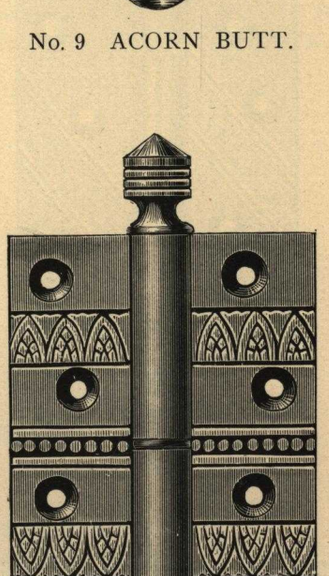
No. 8 ACORN BUTT.



No. 9 ACORN BUTT.



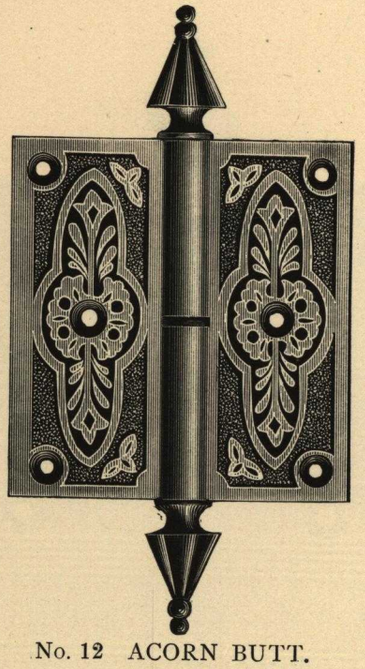
No. 10 BLAKE BUTT.



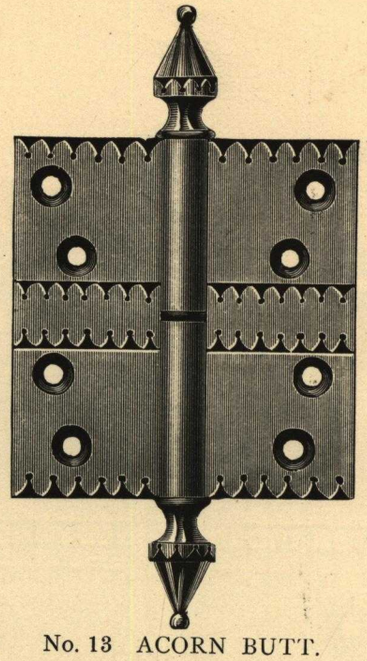
No. 11 ACORN BUTT.

CAR DOOR BUTTS.

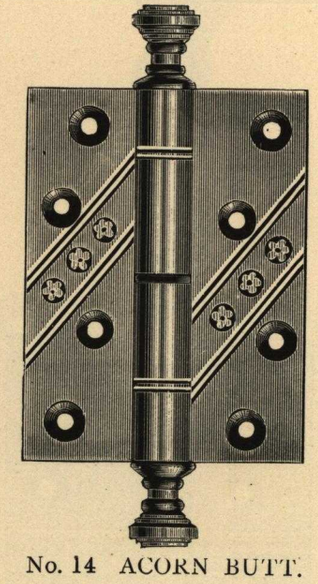
(LOOSE JOINT BUTTS.)



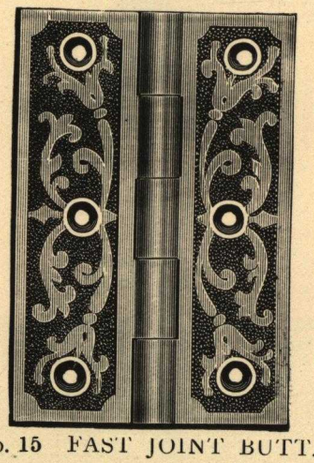
No. 12 ACORN BUTT.



No. 13 ACORN BUTT.



No. 14 ACORN BUTT.

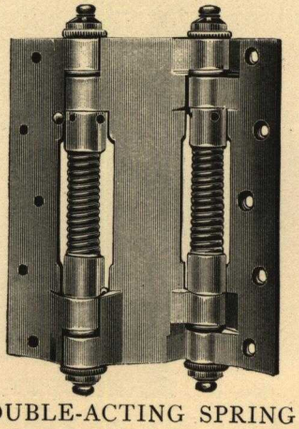


No. 15 FAST JOINT BUTT.

No. 16 DOUBLE-ACTING SPRING HINGE

FOR DOORS FROM 1 TO 1¼ INCHES THICK.

Brass	Per pair,	$9 00
Bronze	"	10 00
Plated	"	10 00

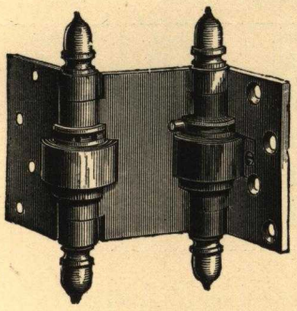


No. 16 DOUBLE-ACTING SPRING HINGE.

SPRING HINGES.

(FOR DOORS.)

UNION DOUBLE ACTING, SINGLE SPRING HINGES.



Length of Flanges.	Adapted to Doors.	Japanned with Plated Springs.	Real Brass or Bronze.	Iron, Nickel Plated.
No. 102 2½ inch,	¾ to 1 inch thick...per pair,	$2 00	$10 00	$ 6 00
103 3 "	1 to 1¼ " ... "	3 00	12 00	7 00
104 4 "	1 to 1⅜ " ... "	4 00	14 50	8 50
105 5 "	1¼ to 1½ " ... "	5 00	16 00	10 50
106 6 "	1¼ to 1¾ " ... "	6 50	18 00	13 00
107 7 "	1¼ to 2 " ... "	8 00	24 00	16 00

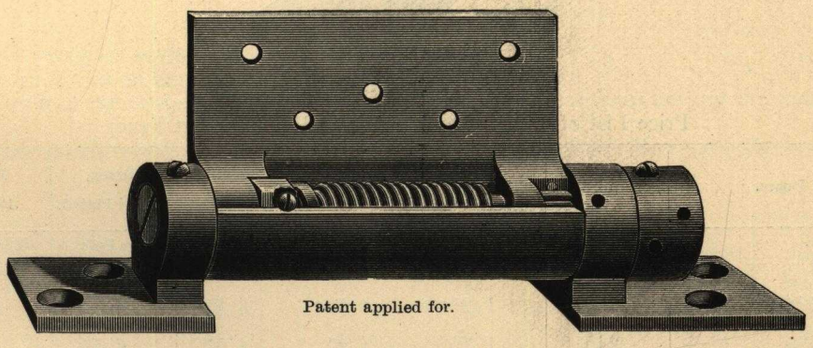
For Wire Screen and other light Doors, use 2½ or 3 inch Hinges. For ordinary Doors, 1 and 1¼ inches thick, use 4 inch Hinges. For ordinary Doors, 1¼ and 1½ inches thick, use 5 inch Hinges. For large outside Doors, 1¼ and 1¾ inches thick, use 6 inch Hinges. For large outside Doors, 1¾ and 2 inches thick, use 7 inch Hinges.

For heavy and much exposed Doors, Hinges having double springs are recommended. Special prices.

UTILITY SPRING HINGES.

The Utility Hinge presents a few novel features to which we call your attention. The inventor has produced a Spring Hinge that can be adjusted to prevent the Hinge from projecting out at the side of the door, and also prevents the door from sagging. They are made of the best material, and at the same time for cheapness and durability cannot be excelled. The same Hinge will handle a light or heavy door, as the Hinge is so made that the weight of the door rests on the Hinge, not on the Spring, leaving the Spring free to perform its work.

UTILTY DOUBLE-ACTING SPRING HINGE.



Patent applied for.

A few reasons showing its advantages:

1. The Spring can be adjusted to any desired tension, after as well as before the door is hung.
2. The door can be adjusted so it will swing to the center, by means of a set screw; this is a new and important improvement in Spring Hinges.
3. The door swings from the center, and thereby produces an even leverage, making less resistance for the power of the Spring, so that the door does not swing back and forth after reaching place.
4. By swinging from the center they only require two Springs, using both of them each time, thereby preventing loss of the tension, and the Spring being adjustable, may be put at any desired strength, according to the weight of door.
5. The door cannot sag so that the bottom will rub on the floor, and the Hinge never projects beyond stile of the door, consequently making a neat appearance.

SPRING HINGES.

(FOR DOORS.)

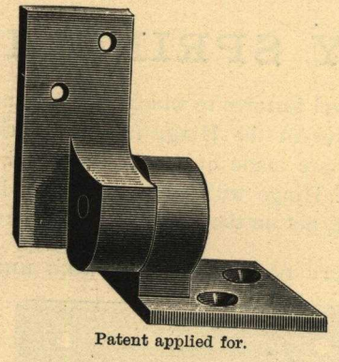
Price List of Utility Double Acting Spring Hinges:

Length of Flanges.	Thickness of Doors.	Number.	Iron, Japanned.	Iron, Tucker Bronze.	Iron, Nickel Plated.	Brass, Nickel Plated.	Real Brass.	Real Bronze.
Inches.	Inches.		Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,
2¾x3¾	¾ to 1	220	$1 60	$ 3 25	$ 5 00	$ 7 50	$ 7 50	$ 7 50
3 x4½	1 to 1¼	230	2 50	5 00	7 50	11 50	11 50	11 50
3¼x5¼	1¼ to 1½	240	3 50	6 50	9 00	13 50	13 50	13 50
3½x6	1⅝ to 2	250	4 50	8 00	11 00	17 00	17 00	17 00
4¼x7	2⅛ to 2½	260	9 00	13 00	19 00	29 00	29 00	29 00

Order by number, stating kind of finish wanted.

UTILITY BLANKS FOR DOUBLE ACTING SPRING HINGES.

We call your attention to our new style of Blank Hinges, which we use only with our Double Acting Spring Hinges. By using them quite a saving can be made, as we use only two Spring Hinges on one door, and for inside doors a blank may be used in place of the Spring Hinge at the bottom of the door, except in cases where there is a strong draft of air. The same blanks will answer for either right or left hand doors, using the blank nearest the thickness of the door.



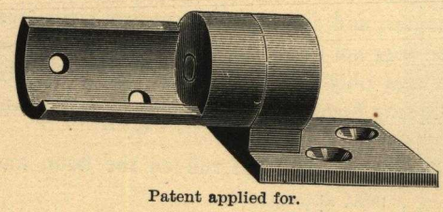
Patent applied for.

FLAT FACE.

Price List of Utility Double Acting Blanks—Flat Face:

Thickness of Doors.	Number.	Iron, Japanned.	Iron, Tucker Bronze.	Iron, Nickel Plated.	Brass, Nickel Plated.	Real Brass.	Real Bronze.
Inches.		Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,
¾ to 1	225	$ 80	$1 60	$2 50	$ 3 75	$ 3 75	$ 3 75
1 to 1¼	235	1 25	2 50	3 75	5 75	5 75	5 75
1¼ to 1½	245	1 75	3 25	4 50	6 75	6 75	6 75
1⅝ to 2	255	2 25	4 00	5 50	8 50	8 50	8 50
2¼ to 2½	265	4 50	6 50	9 50	14 50	14 50	14 50

Order by number, stating kind of finish wanted.



Patent applied for.

HALF ROUND FACE.

SPRING HINGES.

(FOR DOORS AND GATES.)

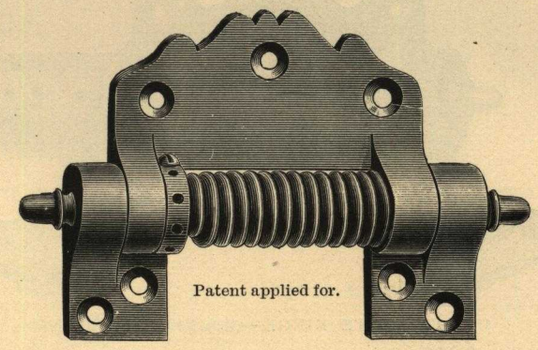
Price List of Double Acting Blanks—Half Round Face.

Thickness of Doors.	Number.	Iron, Japanned.	Iron, Tucker Bronze.	Iron, Nickel Plated.	Brass, Nickel Plated.	Real Brass.	Real Bronze.
Inches.		Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,
¾ to 1	226	$ 80	$1 60	$2 50	$ 3 75	$ 3 75	$ 3 75
1 to 1¼	236	1 25	2 50	3 50	5 75	5 75	5 75
1¼ to 1½	246	1 75	3 25	4 50	6 75	6 75	6 75
1⅝ to 2	256	2 25	4 00	5 50	8 50	8 50	8 50
2¼ to 2½	266	4 50	6 50	9 50	14 50	14 50	14 50

Order by number, stating kind of finish wanted.

UTILITY SINGLE ACTING SPRING HINGES.

This Hinge is made in three parts, which are interchangeable. The Hinge proper contains the Spring, and is screwed on the side of the door. The two flanges which are interchangeable are screwed to the jamb of the door without any cutting of the jamb. The edge of the door stile is chamfered at about the thickness of the flange; thus you have a durable Hinge, easy to put on, perfectly adjustable. The Hinge will answer for a heavy or light door either inside or outside.



UTILITY SINGLE ACTING SPRING HINGE.

A few reasons showing its advantages:

1. It is less work to put on and will hold the door firmer in place.
2. It may be used in the center of the door jamb and at the edge, without cutting the jamb or putting on a strip of wood.
3. If the Spring should break, the Hinge will act the same as any Blank Butt, and also is easily replaced by a new Spring.

Price List of Utility Single Acting Spring Hinge:

Length of Flanges.	Thickness of Doors.	Number.	Iron, Japanned.	Iron, Tucker Bronze	Iron, Nickel Plated.	Brass, Nickel Plated.	Real Brass.	Real Bronze.
Inches.	Inches.		Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,
2¼x3¼	¾ to 1	110	$ 80	$1 75	$ 2 50	$ 4 00	$ 4 00	$ 4 00
2¼x4	⅞ to 1¼	120	1 25	2 50	4 00	6 00	6 00	6 00
2½x5¼	1 to 1⅜	130	1 75	3 25	5 00	7 00	7 00	7 00
2½x6¼	1⅜ to 1¾	140	2 25	4 00	6 50	9 00	9 00	9 00
2¾x7	1½ to 2	150	3 25	5 00	8 25	12 00	12 00	12 00
3 x8	1¾ to 2¼	160	4 50	6 50	11 00	15 50	15 50	15 50

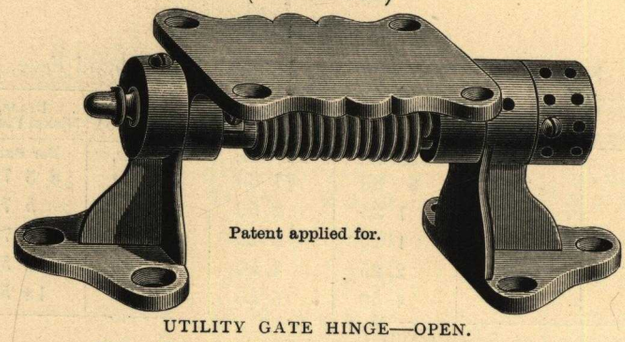
Order by number, stating kind of finish wanted.

UTILITY GATE HINGE.

We call your attention to a perfect Double Acting Gate Hinge. It is adjustable, strong and durable. In order to introduce the Hinge into general use, we have adopted the use of a Blank Hinge, which will reduce the cost. To do this we put on an extra strong Spring, but as the Hinge is provided with an adjustment, any desired tension may be given. On all heavy gates, or those exposed to strong drafts of air, we use two Spring Hinges, but otherwise one Spring and one Blank Hinge will do the work.

SPRING HINGES.

(FOR GATES.)



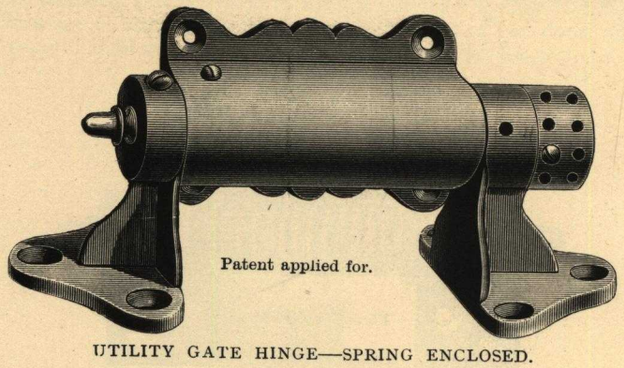
UTILITY GATE HINGE—OPEN.

Price List of Utility Gate Hinge—Open.

Length of Flanges.	Number.	Iron, Japanned.	Iron, Tucker Bronze	Iron, Nickel Plated.	Brass, Nickel Plated	Real Brass.	Real Bronze.
Inches.		Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,
3 x4	50	$1 75	$2 50	$3 50	$4 50	$4 50	$4 50
3¼x5	60	2 25	3 00	4 00	5 00	5 00	5 00

Order by number, stating kind of finish wanted.

No. 50, Light Open Gate.
No. 60, Heavier Gate.



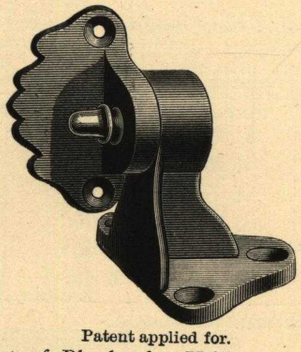
UTILITY GATE HINGE—SPRING ENCLOSED.

Price List of Utility Gate Hinge—Spring Enclosed.

Length of Flange.	Number.	Iron, Japanned.	Iron, Tucker Bronze	Iron, Nickel Plated	Brass, Nickel Plated.	Real Brass.	Real Bronze.
Inches.		Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,
3 x4	70	$2 50	$3 25	$4 25	$5 50	$5 50	$5 50
3¼x5	80	3 00	3 75	4 75	6 00	6 00	6 00

Order by number, stating kind of finish wanted.

No. 70, Light Open Door.
No. 80, Heavier Door.



Patent applied for.

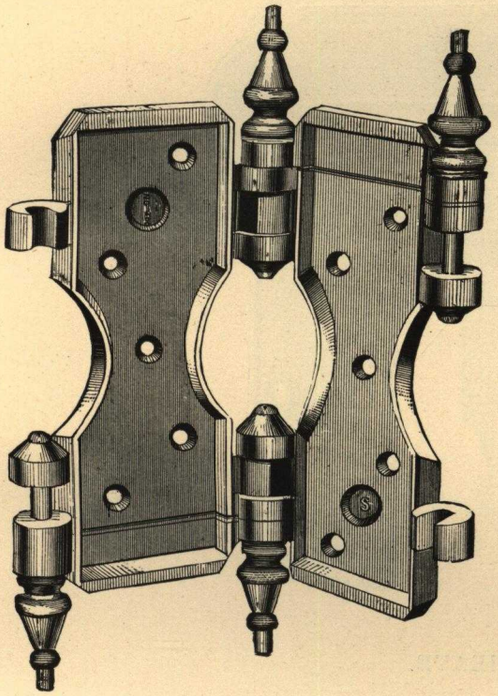
Price List of Blanks for Utility Gate Hinge.

For Gates.	Number.	Iron, Japanned.	Iron, Tucker Bronze	Iron, Nickel Plated.	Brass, Nickel Plated.	Real Brass.	Real Bronze.
		Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,	Per Pair,
Light Open Gate,	55	$ 85	$1 25	$1 75	$2 25	$2 25	$2 25
Heavier Gate,	65	1 15	1 50	2 00	2 50	2 50	2 50

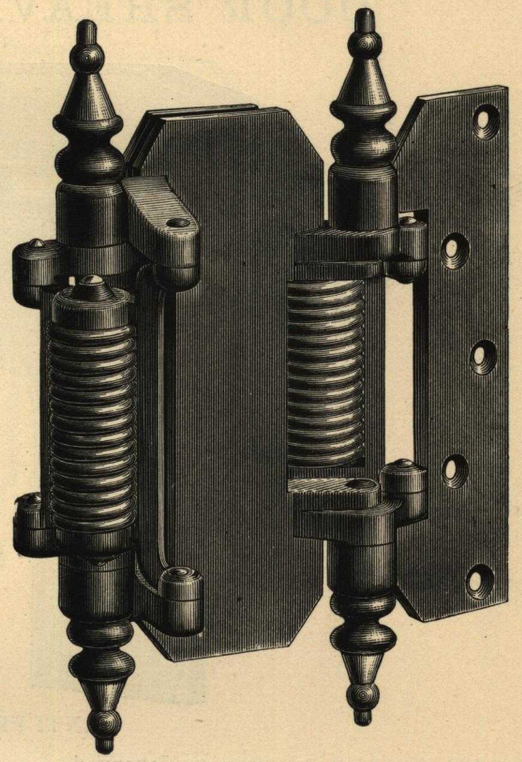
Order by number, stating kind of finish wanted.

No. 55, Light Open Gate.
No. 65, Heavier Gate.

GEER'S SINGLE AND DOUBLE ACTING SPRING BUTTS AND BLANKS.



DOUBLE ACTING BLANK BUTTS.



DOUBLE ACTING SPRING BUTTS.

SPRING HINGES.

In ordering Butts, give dimensions and probable weight of doors, also how exposed outside or inside; then we can intelligently furnish sizes needed.

REAL BRONZE—PLAIN FINISH.

Size of Doors.	Thickness of Doors.	Width of Flange.	SPRING BUTTS, IN PAIRS. No.	Price.	BLANK BUTTS IN PAIRS. No.	Price.
7 ft x2 ft.	1⅜	1⅛	1	$8 00	111	$5 00
7 " x2¼ "	1½	1 3/16	2	10 50	112	6 50
7 " x2½ "	1¾	1½	3	12 00	113	8 00
8 " x2 "	2	1⅜	4	15 00	114	11 00

REAL BRONZE—PLAIN FINISH NICKEL PLATED.

Size of Doors.	Thickness of Doors.	Width of Flange.	SPRING BUTTS, IN PAIRS. No.	Price	BLANK BUTTS, IN PAIRS. No.	Price.
7½ ft.x2½ ft.	1⅜	1⅛	1	$10 00	111	$ 6 25
8 " 2½ "	1½	1 3/16	2	13 00	112	8 10
8½ " 2¾ "	1¾	1½	3	15 00	113	10 00
9 " 2½ "	2	1⅜	4	18 75	114	13 75

REAL BRONZE—ORNAMENTED, NICKEL PLATED.

Size of Doors.	Thickness of Doors.	SPRING BUTTS, IN PAIRS. No.	Price.	BLANK BUTTS, IN PAIRS. No.	Price.
6½ ft.x2 ft.	1⅛ inch,	12	$10 00	...	....
6½ " x2 "	1¼ "	13	11 25	...	....
6½ " x2 "	1½ "	14	12 50	...	....
7 " x2½ "	1¼ "	10	18 75	100	$10 25
7 " x2½ "	1½ "	20	22 50	200	12 75
7 " x2½ "	1¾ "	30	25 00	300	14 75
8 " x2½ "	1½ "	48	28 00	480	15 60
8 " x2½ "	1¾ "	49	31 25	490	17 00
8 " x3 "	2 "	50	34 50	500	18 50

REAL BRONZE—ORNAMENTED.

Size of Doors	Thickness of Doors.	SPRING BUTTS, IN PAIRS. No.	Price.	BLANK BUTTS, IN PAIRS. No.	Price.
6½ ft.x2 ft.	1⅛ inch,	12	$ 8 00	...	....
6½ " x2 "	1¼ "	13	9 00	...	....
6½ " x2 "	1½ "	14	10 00	...	....
7 " x2½ "	1¼ "	10	15 00	100	$ 8 20
7 " x2½ "	1½ "	20	18 00	200	10 20
7 " x2½ "	1¾ "	30	20 00	300	11 80
8 " x2½ "	1½ "	48	22 50	480	12 50
8 " x2½ "	1¾ "	49	25 00	490	13 50
8 " x3 "	2 "	50	27 50	500	14 75

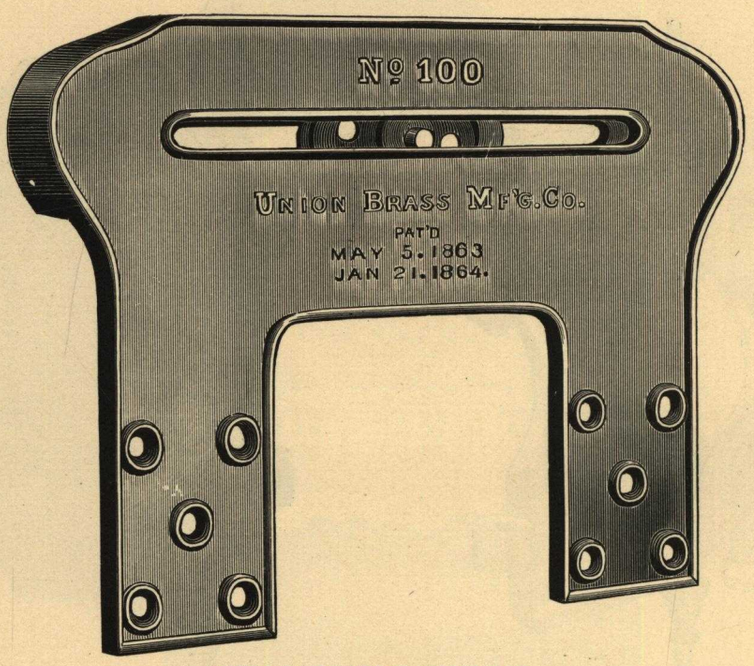
JAPANNED.

Size of Doors.	Thickness of Doors.	SPRING BUTTS, IN PAIRS. No.	Price.	BLANK BUTTS, IN PAIRS. No.	Price.
7 ft.x2 ft.	1⅜ inch,	10	$3 50	100	$1 80
7 " x2¼ "	1½ "	20	4 50	200	2 30
7 " x2½ "	1¾ "	30	5 00	300	2 70

JAPANNED.

Size of Doors.	Thickness of Doors.	SPRING BUTTS, IN PAIRS. No.	Price.	BLANK BUTTS, IN PAIRS. No.	Price.
8 ft.x2 ft.	1¾ inch,	40	$6 00	400	$3 30
8 " x2 "	2 "	41	6 50	410	3 50
8 " x2½ "	2 "	50	7 50	500	4 00

DOOR SHEAVES AND HOLDERS.

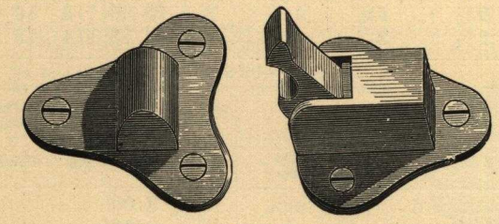


ANTI-FRICTION SHEAVE.

No. 100	For 11 ft. opening, Japanned	Per pair,	$6 00
90	" 8 " 6 in. " "	"	5 50
80	" 6 " 6 " " "	"	5 00
60	" 5 " " "	"	4 50
50	" 4 " " "	"	4 00
Iron Door Track, $\frac{3}{16}$ x 1¼ inch		Per foot,	18

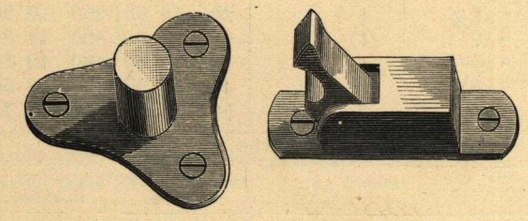
Our Patent Anti-Friction Door Sheave was introduced some years since, and is now extensively used by railway companies and builders, with universal and complete success, all according to it the merit of superiority.

The Sheave shown in above cut is designed for use on Baggage, Express and Mail Car Doors; also for Freight House, Shop, or any other sliding doors. With these Sheaves the heaviest doors can be moved with perfect ease.



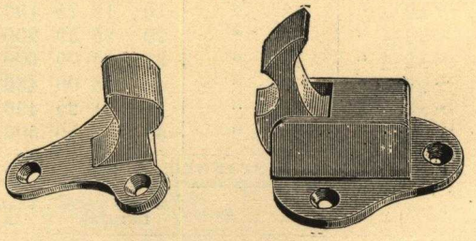
No. 1. DOOR HOLDER.

No. 1	For Swinging Door, Brass	Each,	$0 85
1	" " " Plated	"	95
4	" " " Brass	"	1 10
4	" " " Plated	"	1 30



No. 2. DOOR HOLDER.

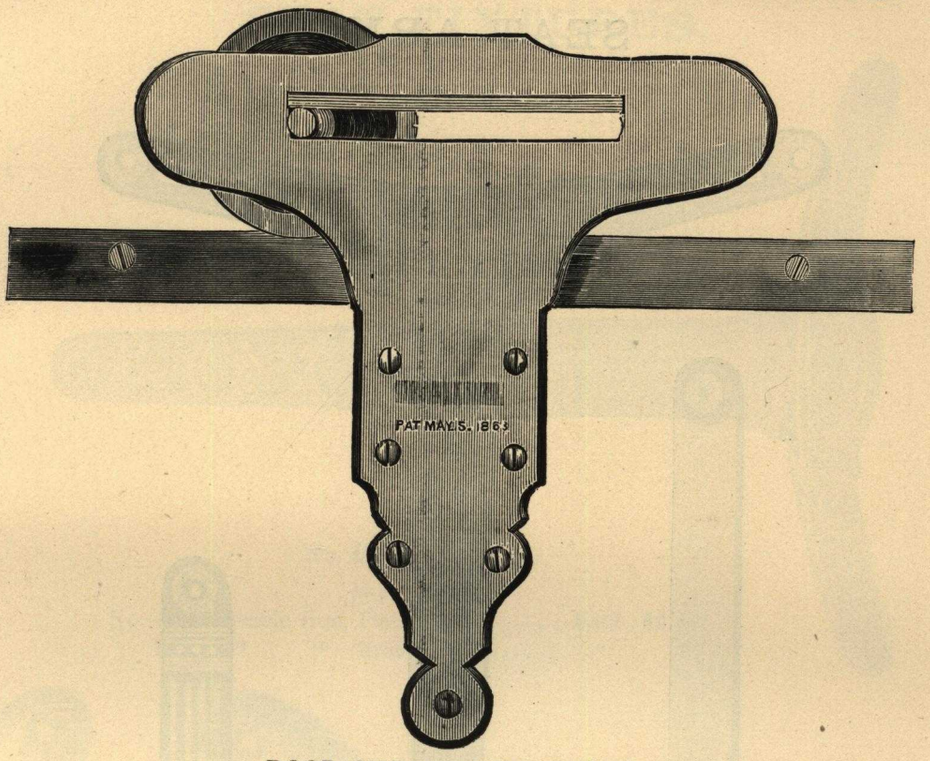
No. 2	For Sliding Door, Brass	Each,	$0 85
2	" " Plated	"	95



No. 3. DOOR HOLDER.

No. 3	For Swinging Door, Brass	Each,	$1 00
3	" " " Plated	"	1 20

DOOR SHEAVES AND HOLDERS.



DOOR SHEAVE AND TRACK.

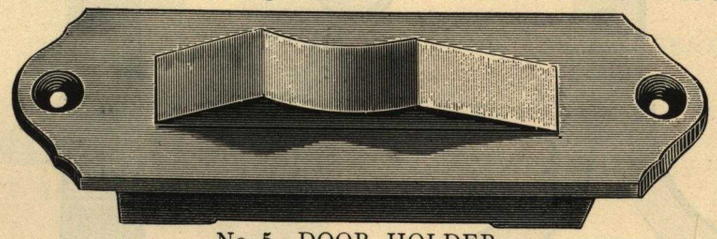
No. 1 Tread 2 ft. 4 in., Brass.....Each, $3 00
1 " 2 " 4 " Plated..... " 3 25

No. 5 Tread 2 ft. 11 in., Brass .....Each, $3 40
5 " 2 " 11 " Plated..... " 4 00

Door Track, ¼ x 1 in., Iron .....Per foot, $0 20
" ¼ x 1 " Plated..... " 90

Track for No. 1 should be 4 feet 8 inches long.

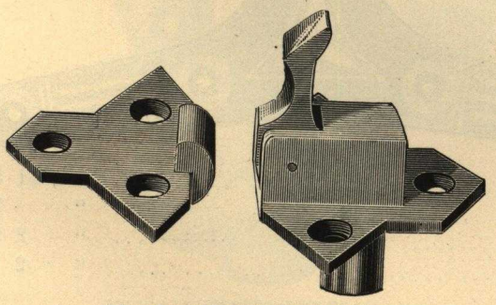
Track for No. 5 should be 5 feet 10 inches long.



No. 5 DOOR HOLDER.

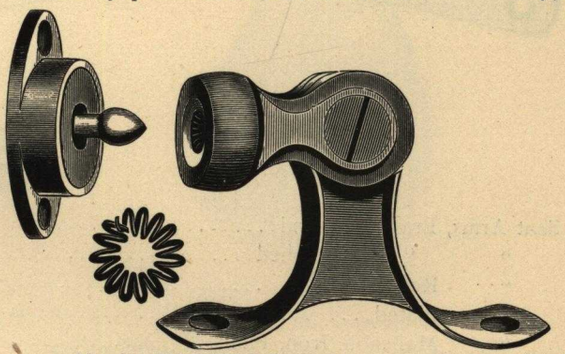
No. 5 Brass.....Each, $1 25
5 Plated..... " 1 50

No. 5 Bronze.....Each, $1 50
5 Japanned ..... " 70



No. 6 DOOR HOLDER.

No. 6 Brass .....Each, $1 00
6 Bronze..... " 1 20
6 Plated ..... " 1 20



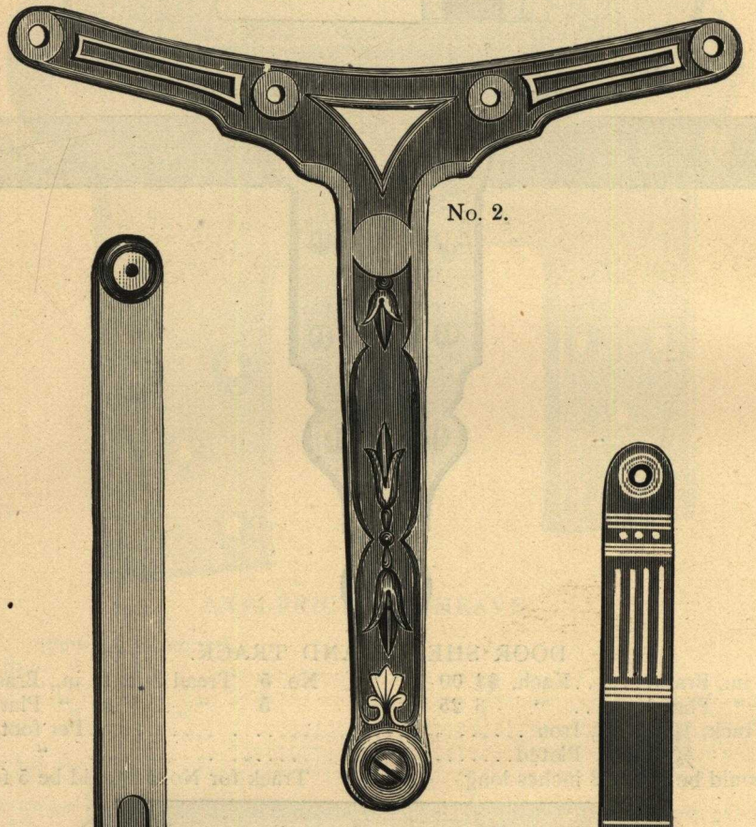
No. 7 BARNARD DOOR HOLDER.

Patented March 25, 1879.—Aug. 15, 1882.

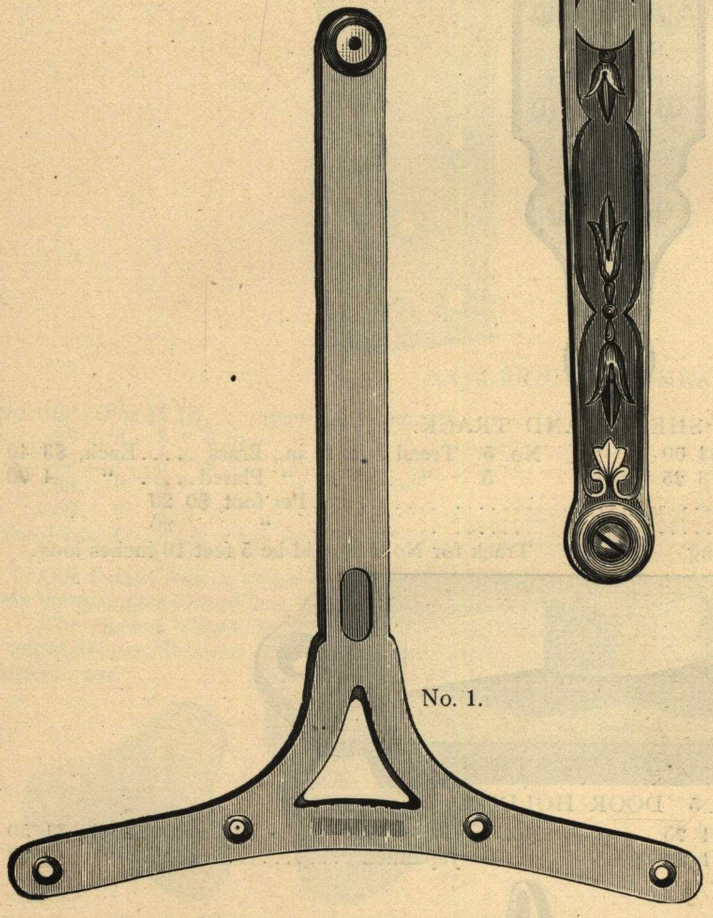
Japanned .....Per doz. $6 00
Nickel Plated or Bronzed ..... " 8 00

SEAT ARMS.

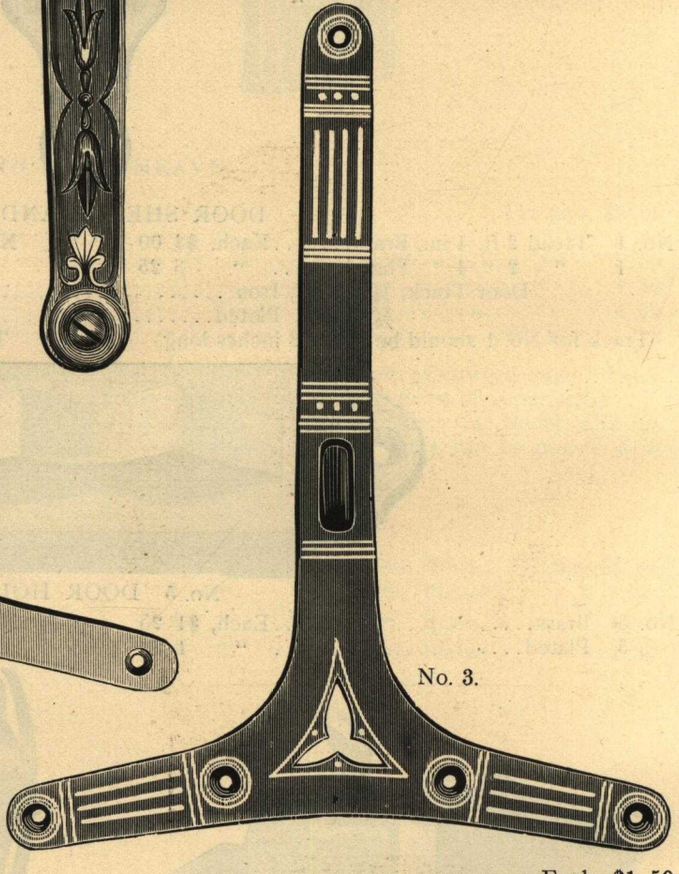
(SEAT BACK ARMS.)



No. 2.



No. 1.

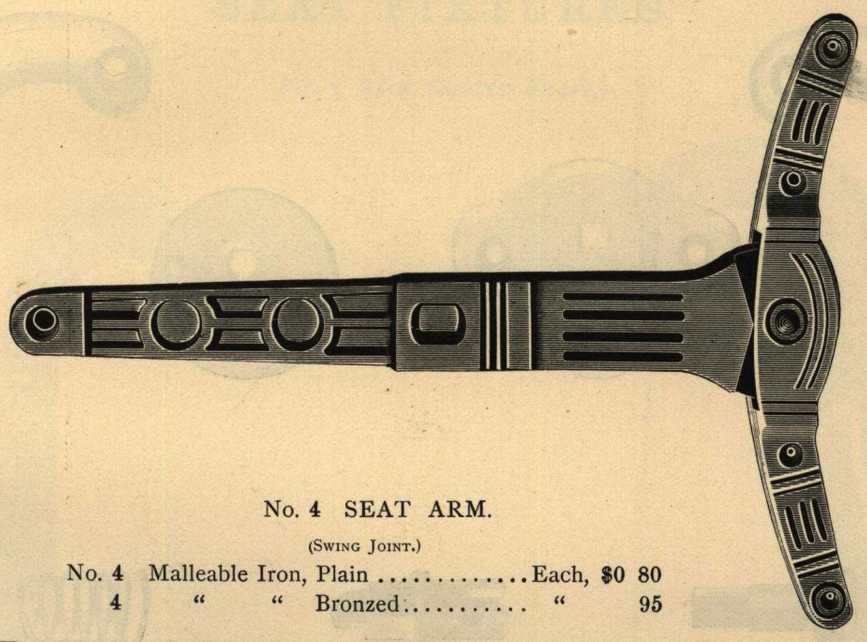


No. 3.

Seat Arms, Brass, Finished	Each,	$1 50
" " Unfinished	"	75
" Real Bronze	"	2 25
" Plated	"	2 75
" Malleable Iron, Plain	"	30
" " " Bronzed		40

We have Patterns for Seat Arms of a great variety of sizes and designs, which enables us to fill all orders promptly.

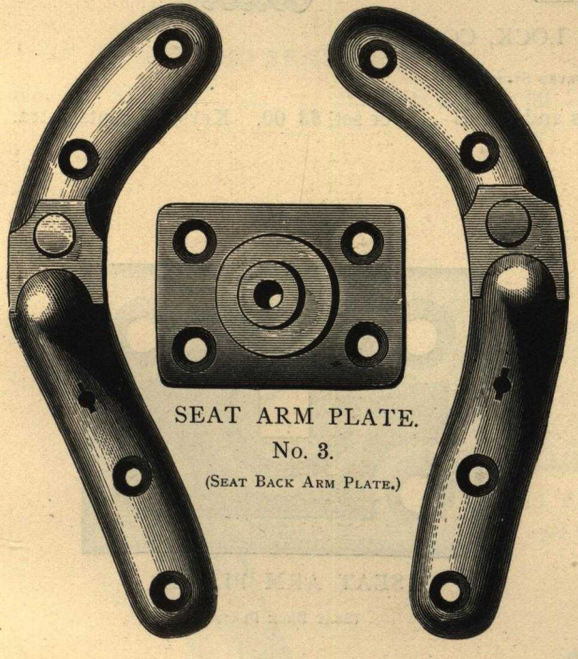
SEAT FIXTURES.



No. 4 SEAT ARM.

(SWING JOINT.)

No. 4	Malleable Iron, Plain	Each,	$0 80
4	" " Bronzed	"	95



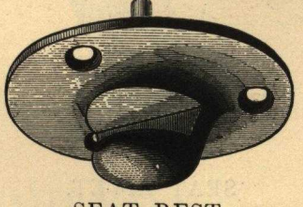
SEAT ARM PLATE.

No. 3.

(SEAT BACK ARM PLATE.)

CURVED SEAT ARM LOCKS.

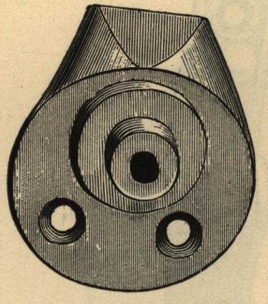
No. 5	Brass	Per doz.	$12 00
5	Plated	"	14 00



SEAT REST.

(SEAT BACK ROUND STOP.)

No. 1	Brass.....	Per doz.	$4 50
1	Plated	"	6 00

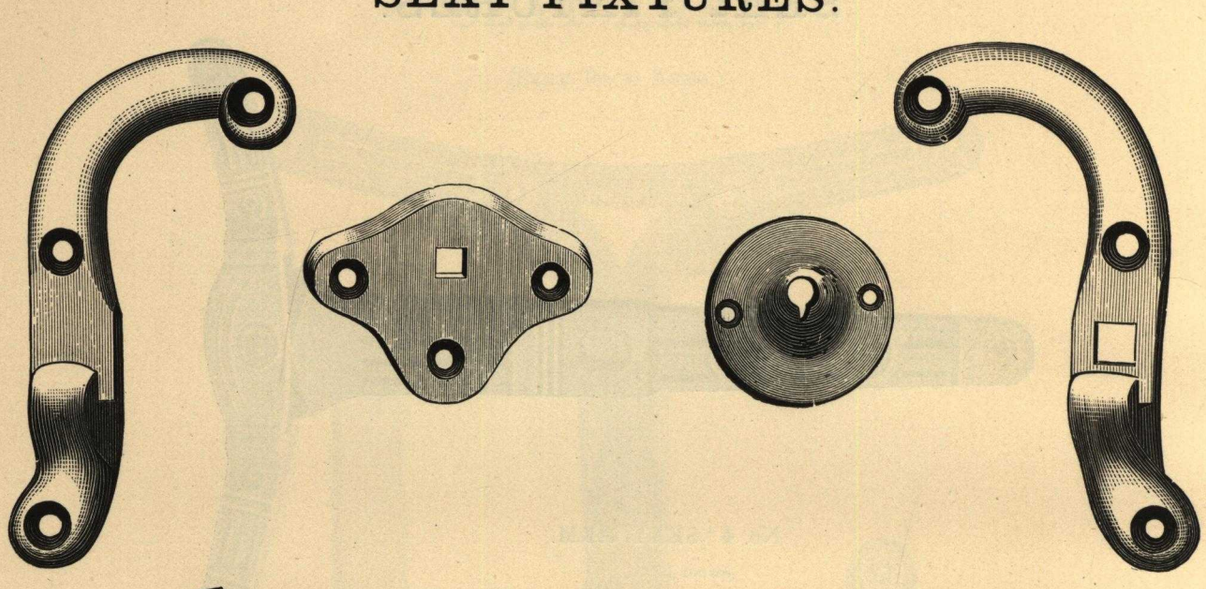


SEAT ARM PLATE.

(SEAT BACK ARM PIVOT PLATE.)

No. 2	With Washer, Brass	Per doz.	$5 50
2	" Plated.....	"	7 50
3	" Brass	"	3 50
3	" Plated.....	"	5 00

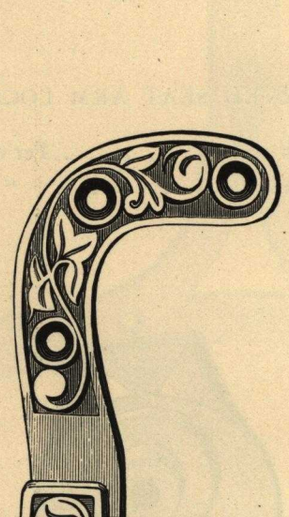
SEAT FIXTURES.



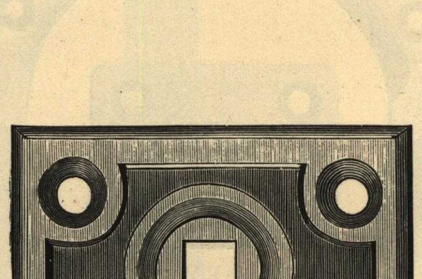
No. 26 POLISHED SEAT LOCK, COMPLETE.

(WITH SEAT BACK CURVED STOPS.)

Includes two Locks, two Escutcheons, two Stops, two Rivets and Plates ... Per set, **$3 00.** Keys, 25 cents extra.



CURVED SEAT STOP.



SEAT ARM PLATE.

(SEAT BACK PLATE.)

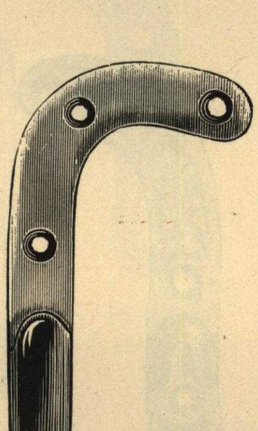
SEAT RIVET.

(SEAT BACK ARM PIVOT.)

No. 27 Ormolu, including Right and Left-hand Curved Seat Stops..... Per set of two each, $1 75

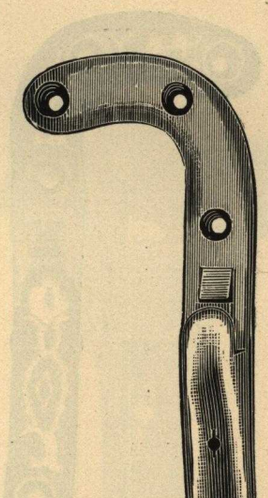
SEAT FIXTURES.

(SEAT BACK CURVED STOPS.)



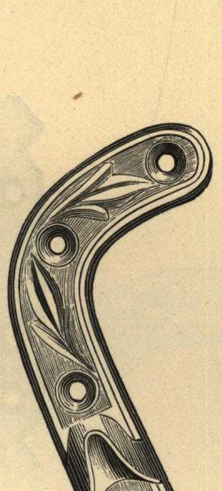
CURVED SEAT STOP.

No. 29	Brass	Per doz.	$5 00
29	Plated	"	6 00



CURVED SEAT LOCK.

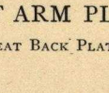
No. 29	Brass	Per doz.	$ 9 00
29	Plated	"	11 00



CURVED SEAT STOP.

SEAT ARM PLATE.

(SEAT BACK PLATE.)



SEAT RIVET.

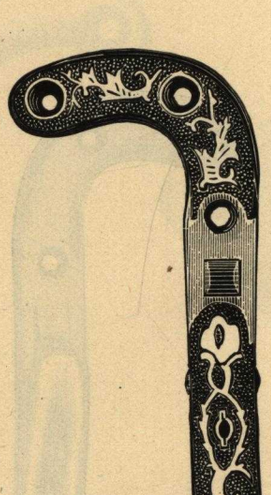
(SEAT BACK ARM PIVOT.)

CURVED SEAT STOP.

No. 30 Ormolu .....Per set of two each, $1 50

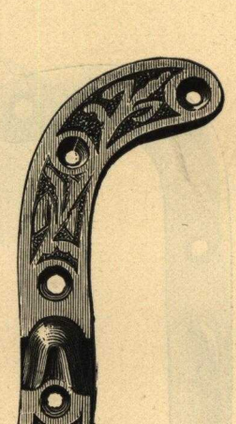
SEAT FIXTURES.

(SEAT BACK STOPS.)



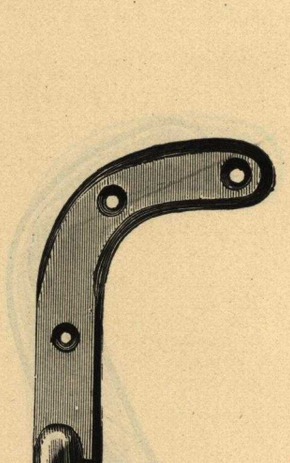
CURVED SEAT LOCK.

No. 31	Brass	Per doz.	$8 00
31	Bronze	"	9 00
31	Stop, without Lock, Brass	"	3 30
31	" " " Bronze.	"	4 30



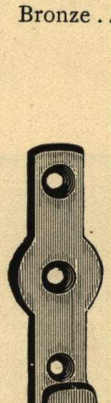
CURVED SEAT STOP.

No. 35	Brass	Per doz.	$3 30
35	Bronze	"	4 30

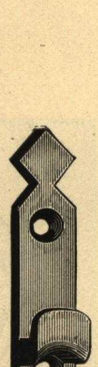


CURVED SEAT ARM STOP.

No. 36	Brass	Per doz.	$5 00
36	Plated	"	6 00



No. 37.



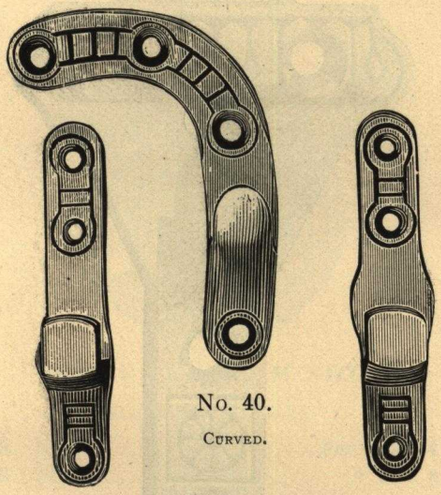
No. 38.

SEAT ARM STOPS.

No. 37	Brass	Per doz.	$3 00
37	Plated	"	4 00
37	Bronze	"	3 50
38	Brass	"	3 00
38	Plated	"	4 00
38	Bronze	"	3 50

SEAT FIXTURES.

(SEAT BACK STOPS.)

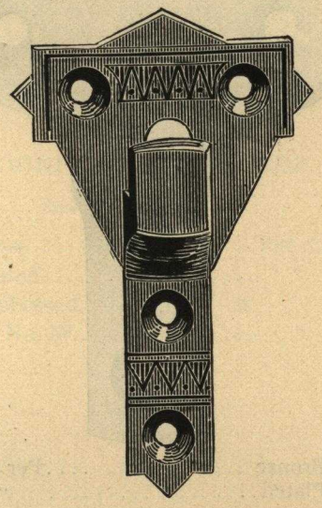


No. 40.
CURVED.

No. 39. No. 41.

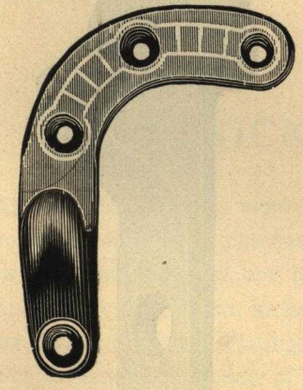
SEAT ARM STOPS.

No. 39	Bronze	Per doz.	$3 00
39	Plated	"	3 00
40	Bronze	"	4 50
40	Plated	"	4 50
41	Bronze	"	3 00
41	Plated	"	3 00



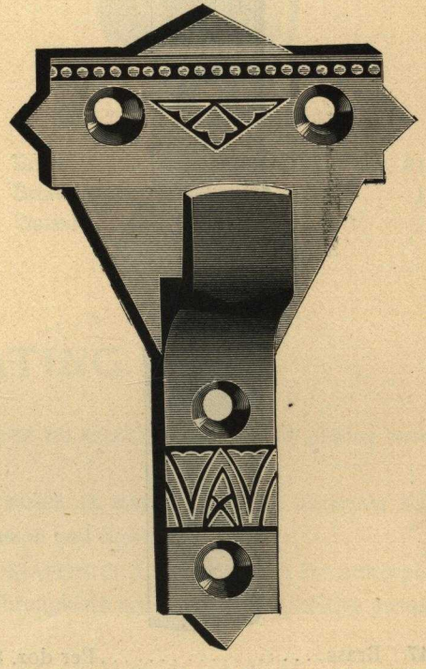
SEAT ARM STOP.

No. 42	Bronze	Per doz.	$5 00
42	Plated	"	5 00



CURVED SEAT ARM STOP.

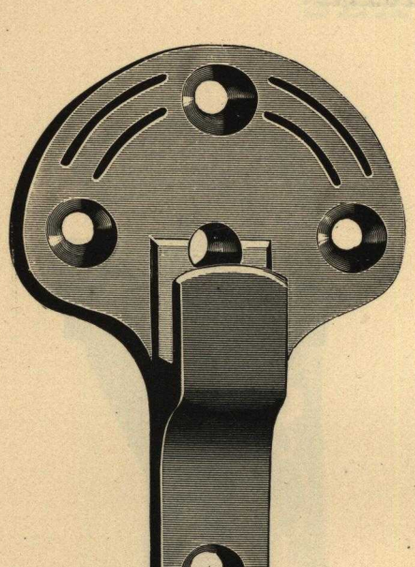
No. 43	Bronze	Per doz.	$4 50
43	Plated	"	4 50



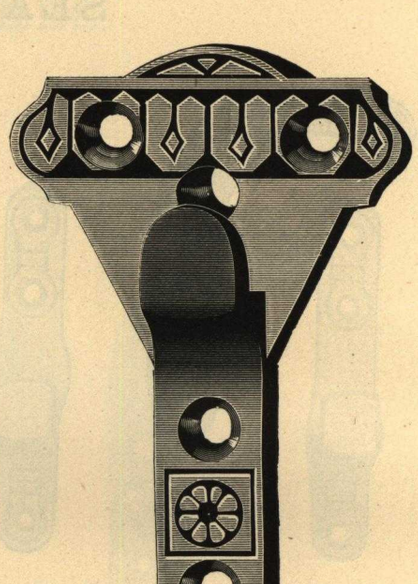
No. 44	Bronze	Per doz.	$5 00
44	Plated	"	5 00

SEAT ARM STOPS.

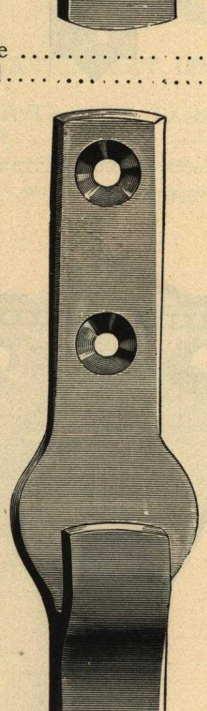
(SEAT BACK STOPS.)



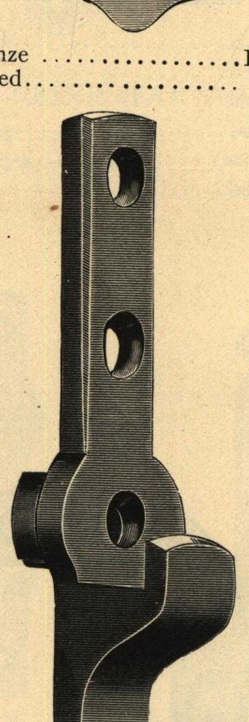
No. 45 Bronze ..... Per doz. $5 00
45 Plated ..... " 5 00



No. 46 Bronze ..... Per doz. $5 00
46 Plated ..... " 5 00

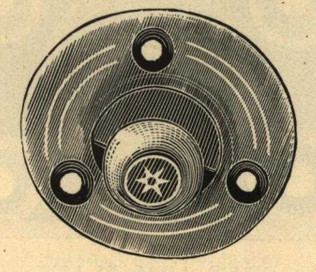


No. 47 Brass ..... Per doz. $3 50
47 Bronze ..... " 4 50
47 Plated ..... " 4 50
Same made in Queen Anne style.



No. 48 Brass ..... Per doz. $3 70
48 Bronze ..... " 4 70
48 Plated ..... " 4 70
Same made in Queen Anne style.

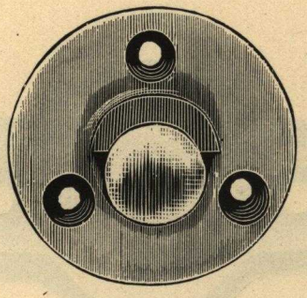
SEAT FIXTURES.



ROUND SEAT ARM STOP.

(SEAT BACK ROUND STOP.)

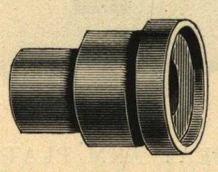
No. 49	Brass	Per doz.	$4 50
49	Plated	"	6 00



ROUND SEAT ARM STOP.

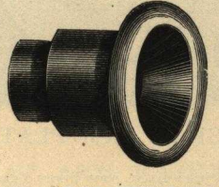
(SEAT BACK ROUND STOP.)

No. 50	Brass	Per doz.	$4 50
50	Plated	"	6 00
51	Embossed, same style as No. 50	"	4 00



SEAT ARM THIMBLE.

No. 1	Brass	Per doz.	$1 20
1	Bronze	"	1 50
1	Plated	"	1 50



SEAT ARM THIMBLE.

No. 2	Brass	Per doz.	$1 20
2	Bronze	"	1 50
2	Plated	"	1 50

NICKEL FOR PLATING.

We call attention to the above named metal, which we believe to be far superior to Silver for plating articles subjected to much handling, and consequent burnishing.

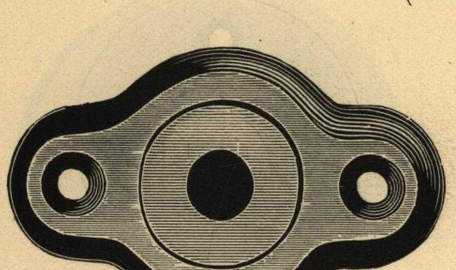
The color is almost identical, but Nickel being nearly THREE TIMES AS HARD, it greatly outwears Silver. Besides retaining a very high polish, its hardness protects it from abrasion and injury.

The CHIEF MERIT of Nickel Plating, however, consists in its NON-AFFINITY for all gases in the atmosphere, and in its power to RESIST the action of acids with which it may be brought in contact; these qualities protect it from corrosion and discoloration.

We do not hesitate to recommend NICKEL PLATING to our friends as productive of the best and cheapest finish for Car Trimmings, especially for Knobs, Locks, and all articles with plain surfaces.

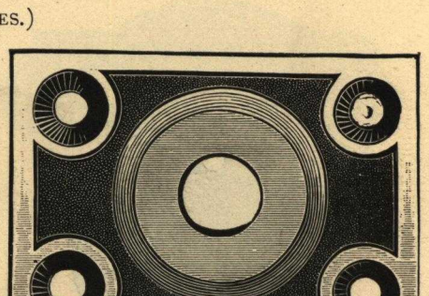
SEAT FIXTURES.

(SEAT BACK ARM PLATES.)



No. 29 SEAT ARM PLATE.

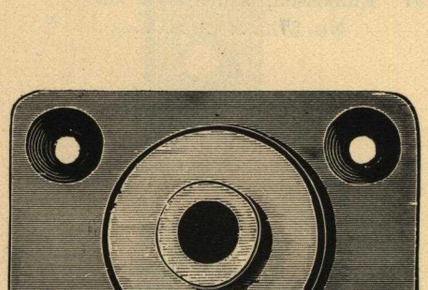
No. 29 Brass ..... Per doz. $3 50
29 Plated ..... " 4 20



SEAT ARM PLATE.

(SEAT BACK ARM PLATE.)

No. 31 Brass ..... Per doz. $3 00



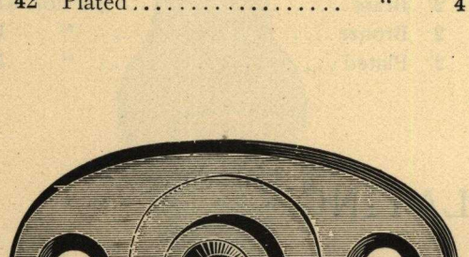
SEAT ARM PLATE.

(SEAT BACK ARM PIVOT PLATE.)

No. 42 Brass ..... Per doz. $3 50
42 Plated ..... " 4 20

SEAT ARM PLATE.

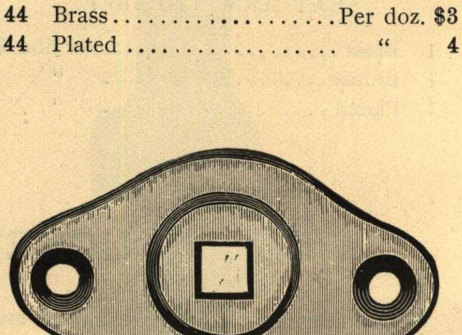
No. 44 Brass ..... Per doz. $3 50
44 Plated ..... " 4 20



SEAT ARM PLATE.

(SEAT BACK ARM PIVOT PLATE.)

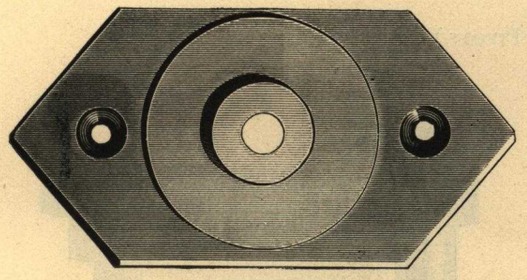
No. 45 Brass ..... Per doz. $3 50
45 Plated ..... " 4 20



SEAT ARM PLATE.

No. 46 Brass ..... Per doz. $3 50
46 Plated ..... " 4 20

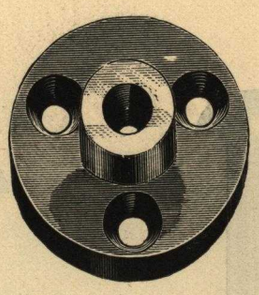
SEAT FIXTURES.



SEAT ARM PLATE.

(SEAT BACK ARM PIVOT PLATE.)

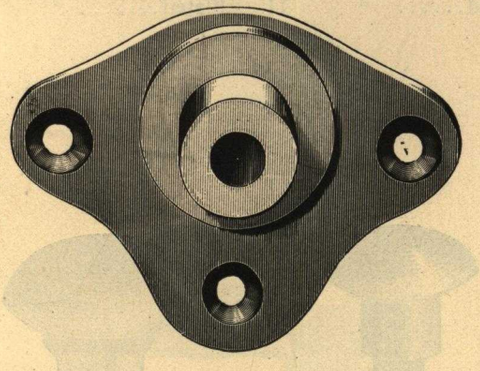
No. 47	Brass	Per doz.	$3 50
47	Bronze	"	4 20
47	Plated	"	4 20



SEAT ARM PLATE.

(SEAT BACK ARM PIVOT PLATE.)

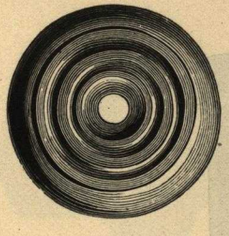
No. 48	Brass	Per doz.	$3 50
48	Bronze	"	4 20
48	Plated	"	4 20



SEAT ARM PLATE.

(SEAT BACK ARM PIVOT PLATE.)

No. 49	Brass	Per doz.	$3 50
49	Bronze	"	4 20
49	Plated	"	4 20



SEAT ARM WASHER.

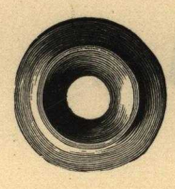
(SEAT ARM PIVOT WASHER.)

No. 1	Brass	Per doz.	$0 66
1	Bronze	"	80
1	Plated	"	80

SEAT ARM WASHER.

(SEAT ARM PIVOT WASHER.)

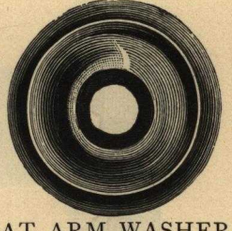
No. 2	Brass	Per doz.	$0 66
2	Bronze	"	80
2	Plated	"	80



SEAT ARM WASHER.

(SEAT ARM PIVOT WASHER.)

No. 3	Brass	Per doz.	$0 66
3	Bronze	"	80
3	Plated	"	80



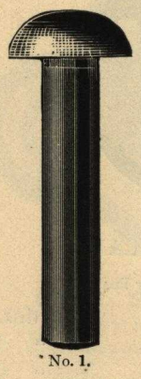
SEAT ARM WASHER.

(SEAT ARM PIVOT WASHER.)

No. 4	Brass	Per doz.	$0 66
4	Bronze	"	80
4	Plated	"	80

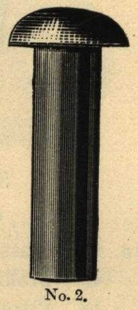
SEAT RIVETS.

(SEAT BACK ARM PIVOTS.)



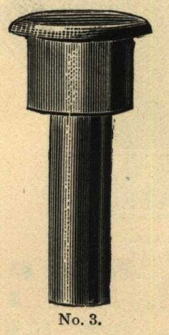
No. 1.

Brass.....Each, $0 08
Plated..... " 11



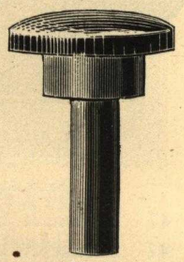
No. 2.

Brass.....Each. $0 08
Plated..... " 11



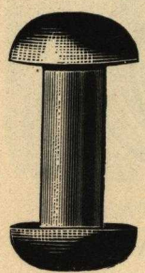
No. 3.

Brass.....Each, $0 08
Plated..... " 11



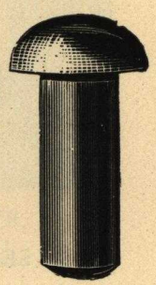
No. 4.

Brass.....Each. $0 08
Plated..... " 11



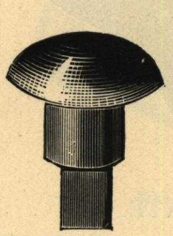
No. 5.

Brass.....Each, $0 15
Plated..... " 18



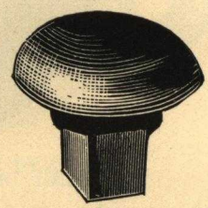
No. 6.

Brass.....Each, $0 10
Plated..... " 13



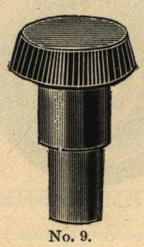
No. 7.

Brass.....Each, $0 07
Plated..... " 10



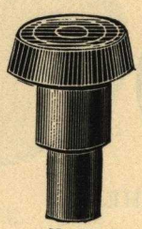
No. 8.

Brass.....Each, $0 07
Plated..... " 10



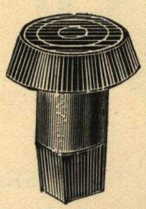
No. 9.

Brass.....Each, $0 08
Plated..... " 11



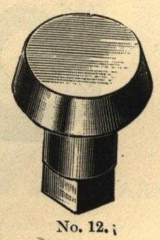
No. 10.

Brass.....Each, $0 08
Plated..... " 11



No. 11.

Brass.....Each, $0 08
Plated..... " 11



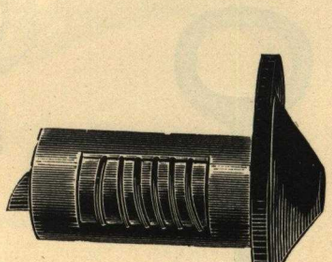
No. 12.

Brass.....Each, $0 08
Plated..... " 11

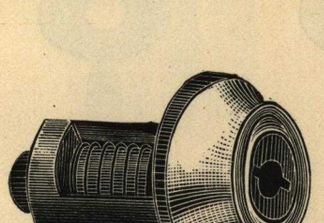
SEAT LOCKS.

(BARREL LOCKS.)

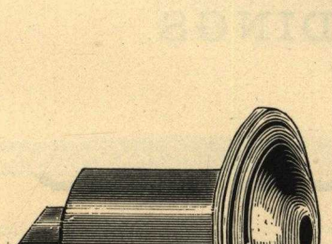
(Full Sizes.)



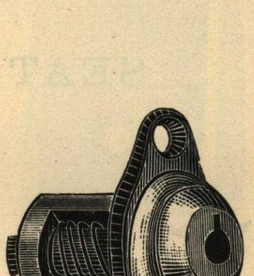
No. 1	Brass	Each,	$0 50
1	Plated	"	60
1	Bronze	"	60



No. 4	Brass	Each,	$0 50
4	Plated	"	60
4	Bronze	"	60

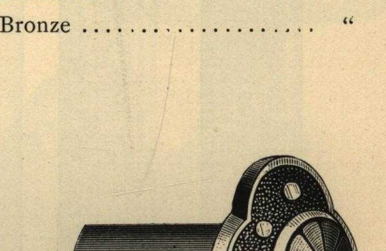


No. 2	Brass	Each,	$0 50
2	Plated	"	60
2	Bronze	"	60



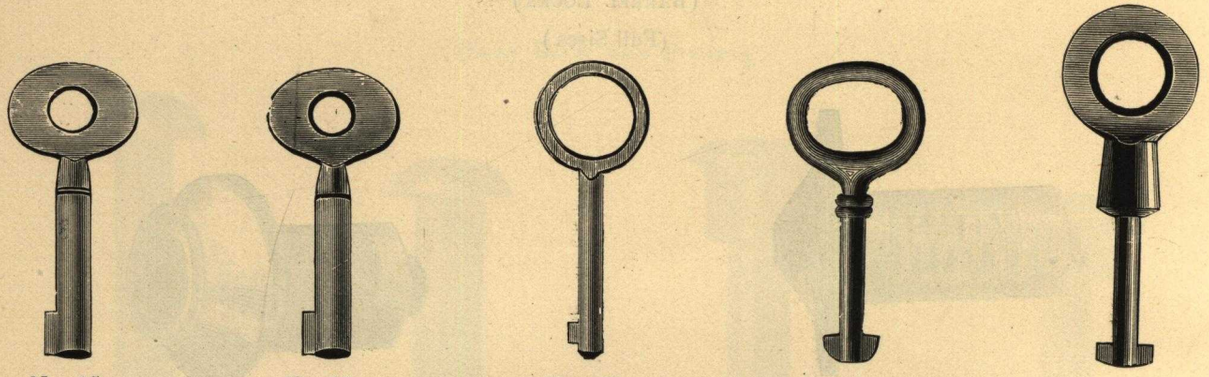
No. 5	Brass	Each,	$0 50
5	Plated	"	60
5	Bronze	"	60

No. 3	Brass	Each,	$0 50
3	Plated	"	60
3	Bronze	"	60



No. 6	Brass	Each,	$0 50
6	Bronze	"	60
6	Plated	"	60

SEAT FIXTURES.



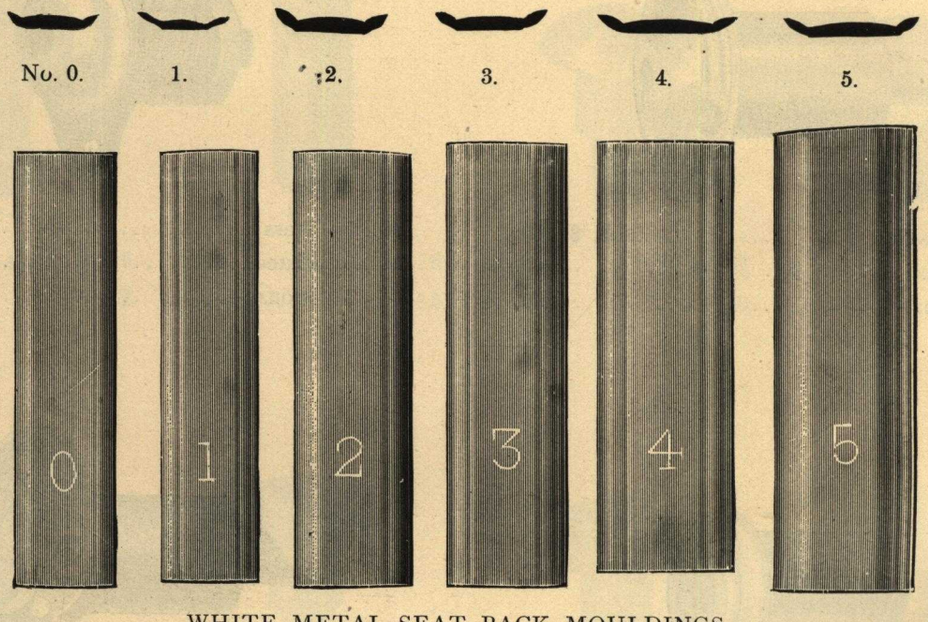
No. 15. No. 16. No. 17. No. 18. No. 19.

SEAT LOCK KEYS.

Brass.....Each, $0 25

SEAT BACK MOULDINGS.

(SEAT BACK BANDS.)

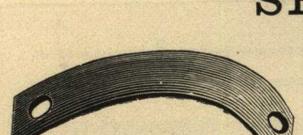


No. 0. 1. 2. 3. 4. 5.

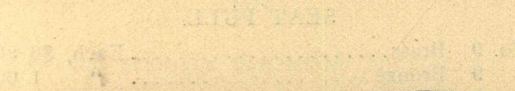
WHITE METAL SEAT BACK MOULDINGS.

No. 1	½ inch,	Flat	Per foot,	$0	13
2	⅝ "	"	"		14
3	⅝ "	Round	"		14
4	¾ "	Flat	"		16
5	¾ "	Round	"		16

SEAT FIXTURES.

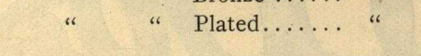


No. 1	Seat Leg Plate,	Brass	Each,	$0 75
1	" "	Nickel Plated.	"	1 00
1	" "	Silver Plated .	"	1 50
2	Seat Arm "	Brass	"	1 00
2	" "	Nickel Plated.	"	1 50
2	" "	Silver Plated .	"	2 00



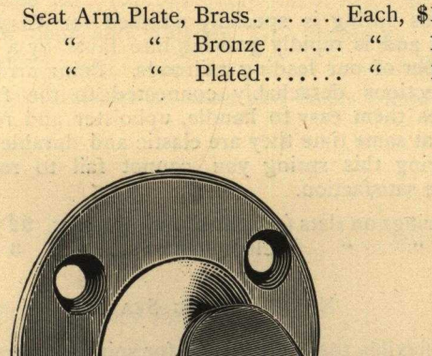
15 x 1⅞

No. 3	Seat Arm Plate,	Brass	Each,	$1 50
3	" "	Bronze	"	2 00
3	" "	Plated	"	2 00



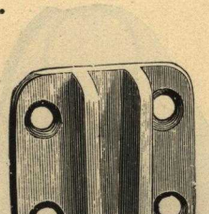
11½ x 1

No. 4	Seat Arm Plate,	Brass	Each,	$1 25
4	" "	Bronze	"	1 50
4	" "	Plated	"	1 50



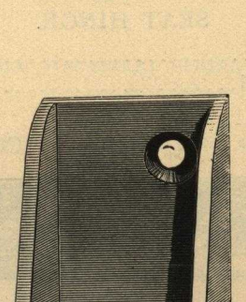
ARM REST BRACKET.

No. 3	Brass	Each,	$0 40
3	Plated	"	50
3	Brass, with Cap for End of Bracket	"	50
3	Plated, with Cap for End of Bracket	"	60



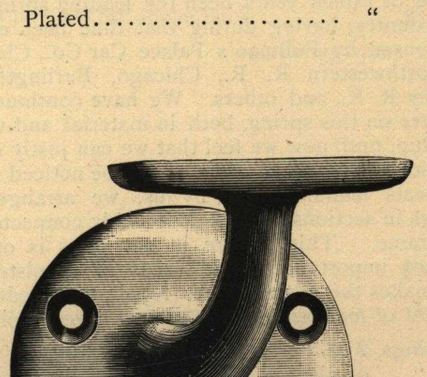
BRACKET FOR IRON BAR.

No. 1	Brass	Each,	$0 25



SEAT RAIL BRACKET.

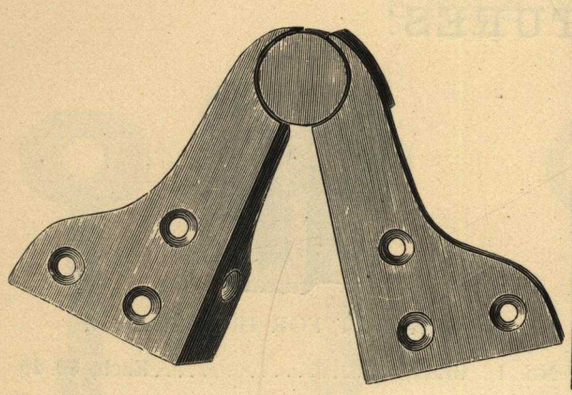
No. 2	Brass	Each,	$0 35
2	Plated	"	45



ARM REST BRACKET.

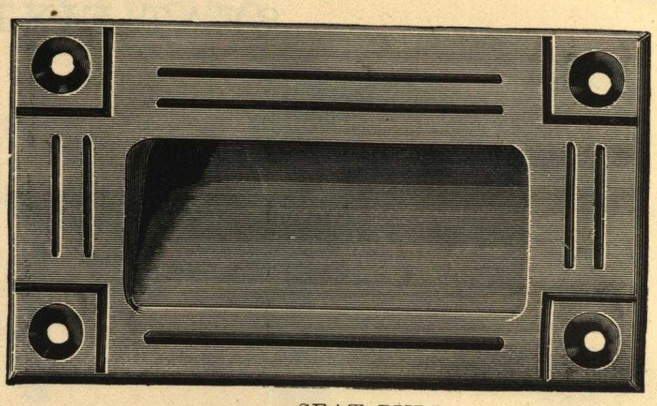
No. 6	Brass	Each,	$0 40
6	Bronze	"	50
6	Plated	"	50

SEAT FIXTURES.



SEAT HINGE.

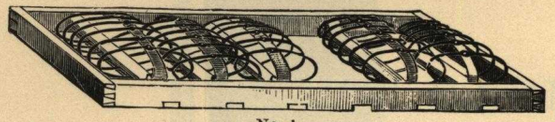
No. 2	Brass	Each,	$0 85
2	Plated	"	1 00



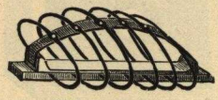
SEAT PULL.

No. 9	Brass	Each,	$0 80
9	Bronze	"	1 00
9	Plated	"	1 00

COBB'S ELLIPTIC STEEL SPRINGS.



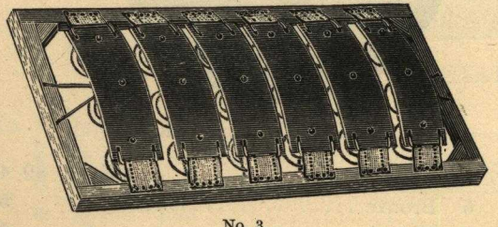
No. 1.



Slat Detached

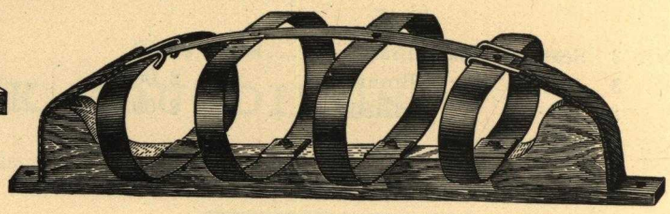
Elliptic Springs for Sleeping and Passenger Car Seats, as manufactured by us, have for the last twelve or fifteen years been the leading springs in this country, having during that time been exclusively used by Pullman's Palace Car Co., Chicago & Northwestern R. R., Chicago, Burlington & Quincy R. R., and others. We have continued to improve on this spring, both in material and workmanship, until now we feel that we can justly claim superiority over all others. It will be noticed in all the seats manufactured by us, we arrange the springs in sections, and all detachably connected to the frame. This feature in car seats is of the greatest importance, as it assists in upholstering, and makes the seats easy to repair, thus reducing the cost of maintenance to the very lowest point.

Springs, 2 to 5 ply	per 100,	$5 00
" on slats	per set of six,	2 25
" " including frame		3 25



No. 3.

PATENT FLEXIBLE TOP SPIRAL SPRING SEAT.



No. 2.

PATENT BROAD BAND ELLIPTIC SEAT SPRING.

This spring is specially adapted for Passenger Cars, and is rapidly growing into favor by a large number of our leading railroads. Being arranged in sections detachably connected to the frame, makes them easy to handle, upholster and repair, and at same time they are elastic and durable. In ordering this spring you cannot fail to receive entire satisfaction.

Springs on slats (see cut above), per seat,		$2 25
" " including frame		3 00

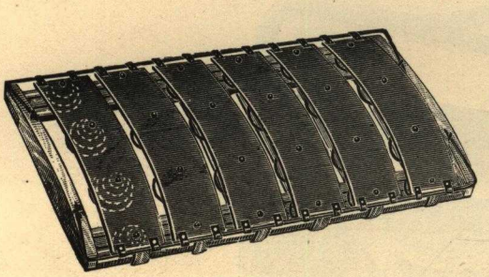
No. 3. SPRING SEAT.

A flexible top or covering for spiral springs has become absolutely necessary for several reasons; first, to prevent the springs from wearing or cutting through the upholstering; and second, to make a plain or even surface to receive the hair, etc., and at the same time be elastic, and not obstruct the working of the springs. This we claim to have discovered in the material known to the trade as Vulcanized Fiber and Leatheroid. You will notice this seat also has its springs arranged so they can be repaired without disturbing the upholstering, and we claim it as being far superior to any spiral spring now before the public.

Springs, Slats, Flexible Top, Hooks and Webbing for six slats or one seat	$1 50
The same as above, including frame	2 25

Estimates furnished for seats and backs complete.

SEAT SPRINGS.

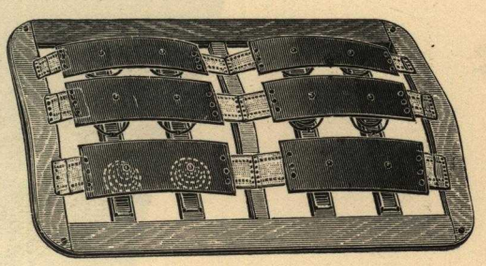


No. 4.

PATENT FLEXIBLE TOP SPRING EDGE SEAT.

This seat is made of the very finest spiral steel springs, and although constructed with springs on the edge it will be found fully as strong as those having the solid edge. The edge cannot possibly get out of shape or break down, and we recommend it to our customers as being a very desirable and easy seat. The Flexible Top is the same as shown in our No. 3. (It only requires one width of plush.)

Springs, Slats and Flexible Top, ready for frame $2 00
Springs, Slats and Flexible Top, including frame 2 75
Estimates furnished for seats and backs complete.



No. 5.

PATENT FLEXIBLE TOP SPIRAL SPRINGS FOR BACK.

The use of springs in the backs of Passenger Car Seats is fast coming into favor, both in the wide—Penn. R. R. style—as well as the ordinary narrow backs, and it is to meet this growing demand that we have especially adapted our Flexible Top Spiral Springs. They are in use on a large number of our leading railroads, and are giving perfect satisfaction.

Springs on slats for above back $1 50
" " " including frame 2 50

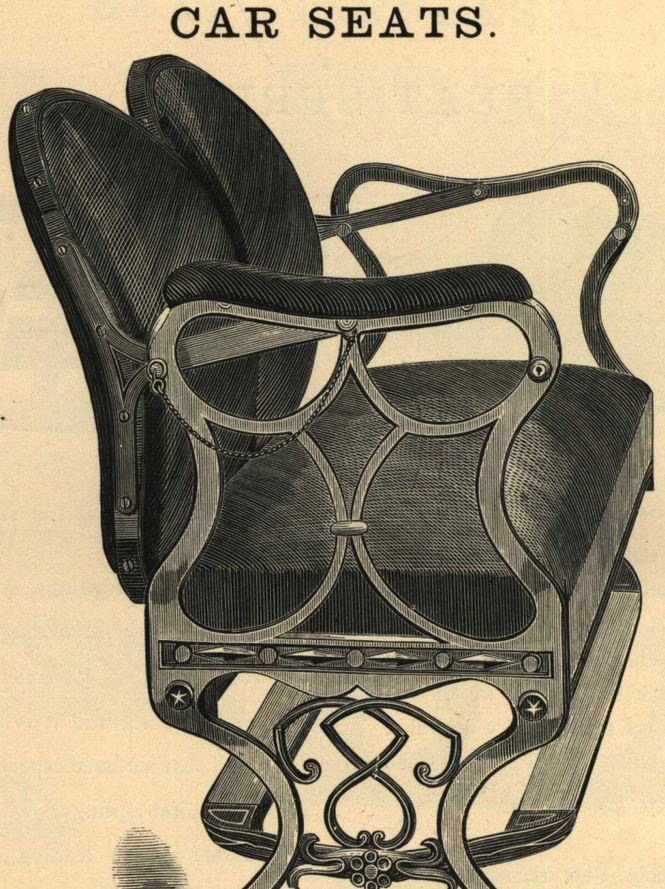
BUSHNELL SPRINGS.

Bunk Springs, usual size	$5 00
Seat " "	1 50
Back " "	1 50

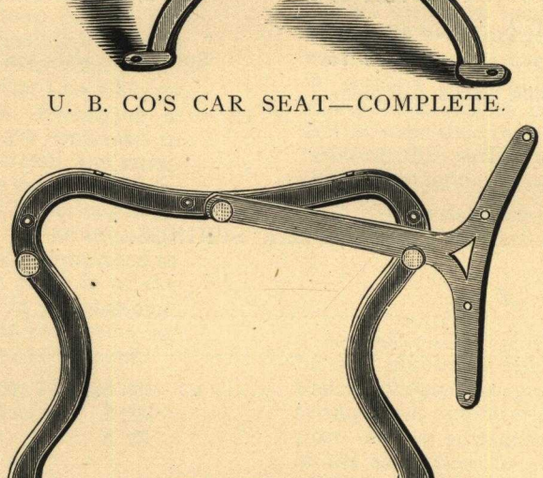
EAGLETON SEAT AND SOFA SPRINGS.

Spiral Seat Springs, Cast Steel Wire (Eagleton),	3	inch	No. 9	Wire	Per gross,	$ 6 50
	4	inch	No. 9	Wire (Eagleton)	"	7 50
	5	"	9	" "	"	8 25
	8	"	9	" " for Sofas	"	10 00
	10	"	9	" "	"	12 00

CAR SEATS.



U. B. CO'S CAR SEAT—COMPLETE.

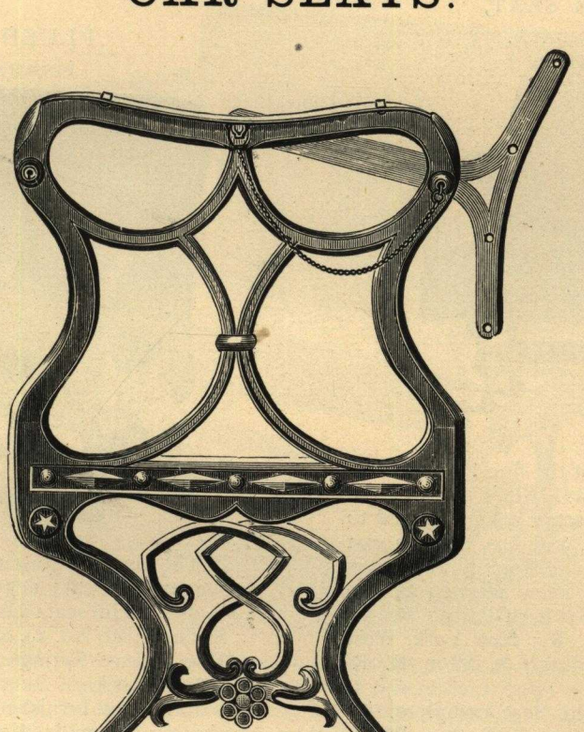


INSIDE FRAME.

The necessities of our business have compelled us to add to our works a department for the manufacture of Car Seats and Reclining Chairs fully upholstered, ready to be screwed to the floor of the car. We have patterns for many kinds of seat frames and Reclining Chairs, and are also prepared to furnish the "Buntin" seat frame, either with or without the upholstering. Having one of the largest Iron Foundries in this branch of the business in the Northwest, we make fine Iron Castings for railroads a specialty, and respectfully solicit your order.

Prices furnished on application.

CAR SEATS.



OUTSIDE FRAME.

U. B. CO'S CAR SEAT FRAMES.

Seat Frames, with Malleable Iron Arms and Treadle, complete	Each,	$6 00
" " " " " " " with two Locks	"	7 00

Estimates for Wood Work and Upholstering furnished on application.

BUNTIN'S PATENT CAR SEAT FRAMES.

Castings for each Reversible Seat		$4 00
Right or Left Hand Corner		2 50
Malleable Striker Arm, with Rivet and Burr	Each,	40
Nickel Plated Arm Cap		2 00
" Seat Locks	Per doz.	6 00
" Joint Bolts	Each,	12
Plain Joint Bolts	"	07
Drilling for Locks		50
" without Lock		30

COBB'S CAR SEATS.

RATTAN CAR SEAT,

PULLMAN STANDARD.

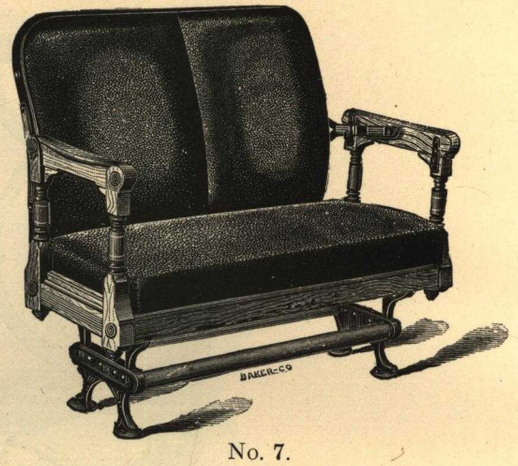
No. 6.

The above is without doubt the finest Rattan Car Seat ever put upon a railroad. It is made of the Wakefield Rattan Co's best rattan, acknowledged to be far superior to all others, and has, both in seat and back, Cobb's Patent Flexible Top Spiral Springs (see Nos. 3 and 5). It has been adopted by the Pullman Palace Car Co.; Northern Pacific R. R.; Chicago & Northwestern R. R.; New York, West Shore & Buffalo R. R.; Chicago & Alton R. R and others.

Estimates furnished for the Seat complete, including ends upholstered either in Rattan, Plush, or in the White.

PLUSH CAR SEAT,

PULLMAN STANDARD.



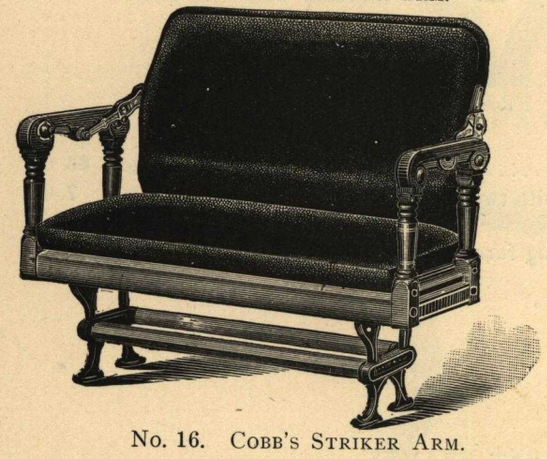
No. 7.

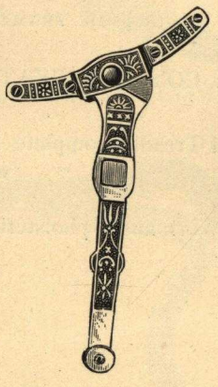
The above represents the Pullman Standard Passenger Car Seats, acknowledged to be the best now in use. The seats have Cobb's Broad Band Elliptic Springs (see No. 2), and the back Cobb's Flexible Top Spiral Springs (see No. 5), and Mason's Patent Rocker.

Estimates furnished for this Seat complete, including seat ends, Wood or Iron, upholstered either in Plush, Rattan or in the White.

CAR SEAT,

WITH IMPROVED STRIKER ARM.





No. 16. COBB'S STRIKER ARM.

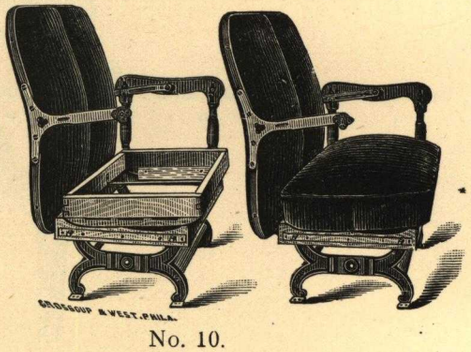
(Patent applied for.)

This Arm is designed to increase the comfort of the passenger by raising the back up to the top of the seat, so that a narrow twenty-two-inch back will be equivalent to the wide twenty-eight-inch. It will readily be seen that, if you can raise a narrow back up and still get the proper incline, you would avoid making the back so wide, and the Plush could then be run lengthwise of the back, instead of across, thus saving nearly thirty per cent. in cost of back, equivalent to one hundred dollars on a car. Another great advantage is that it raises the back out of the way of the foot-rest, and the passenger behind is not cramped for room.

Estimates furnished in any form desired.

PLUSH CAR SEAT,

PENNSYLVANIA R. R. STANDARD.



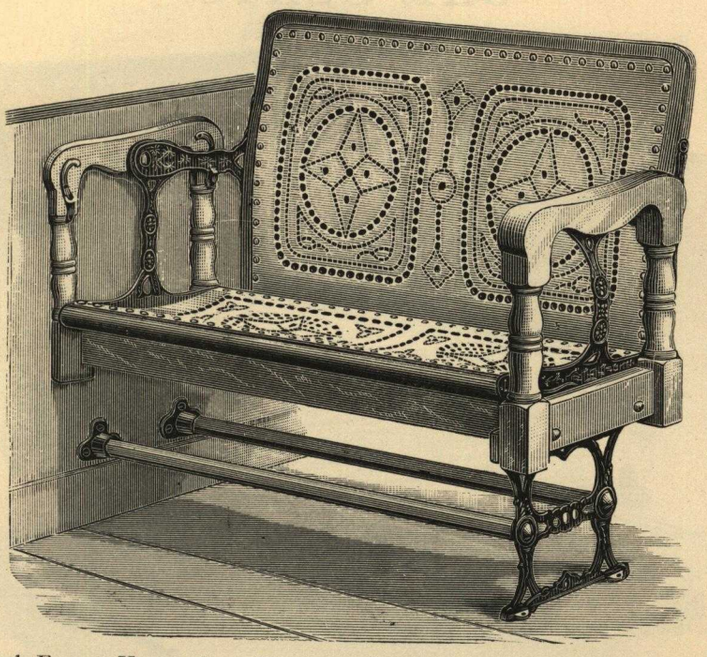
No. 10.

MASON'S PATENT ROCKER.

In representing the Pennsylvania Standard Passenger Car Seat and Back, equipped with our Patent Flexible Top Spiral Springs (see cuts 3 and 5), we wish to call particular attention to Mr. Mason's Patent Rocker. It will be observed that in reversing the back the seat is pushed forward on the frame, and thus by means of the rocker is raised in front and lowered at the back. This, can be seen at once, is very desirable, adding ease and comfort to the passenger, and prevents the tendency to slip or slide off the seats, as experienced in those manufactured without this improvement.

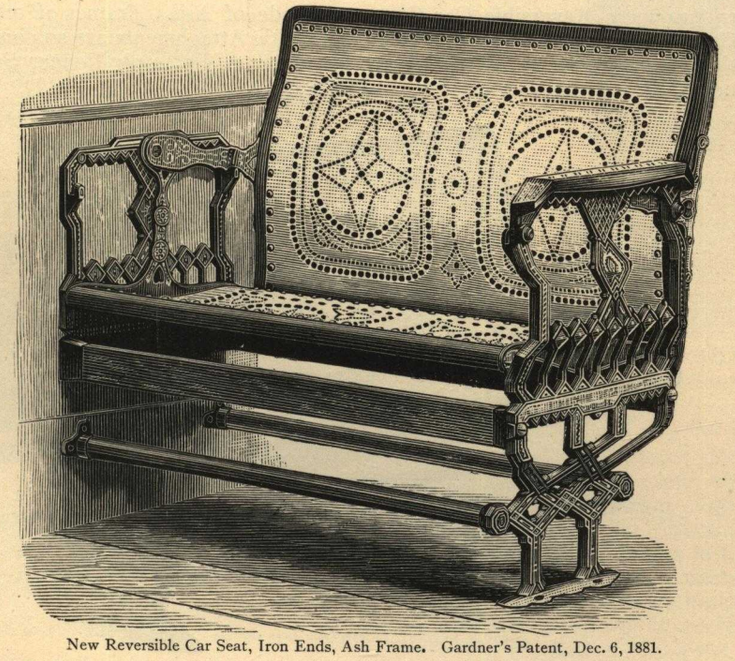
Complete estimates furnished on above Seats and information given in regard to Mason Patent Rocker.

CAR SEATS.



No. 7	Wood End, Ash Frame, Veneer Seat, Veneer on both sides of back	$13 00
7¼	Wood End, Ash Frame, Veneer Seat, Veneer on front side of back only	11 75
7½	Wood End, Ash Frame, Rattan Seat, Veneer on both sides of back	14 50
7½x	Wood End, Ash Frame, Rattan Seat, Rattan on both sides of back	19 50
7¾	Wood End, Ash Frame, Plush Seat, Veneer on both sides of back	21 50

(LOCKS NOT INCLUDED.)



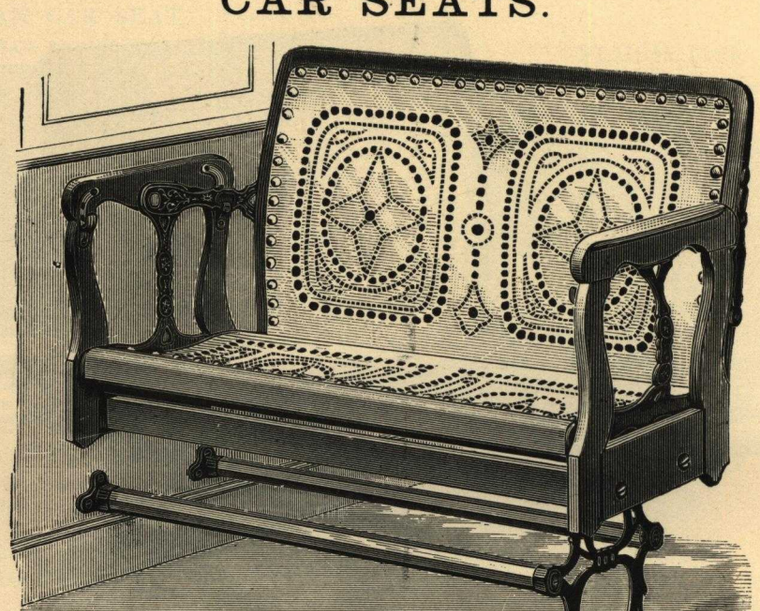
New Reversible Car Seat, Iron Ends, Ash Frame. Gardner's Patent, Dec. 6, 1881.

PATENT PERFORATED THREE-PLY VENEER SEAT.

No. 8	Perforated Veneer Seat, Veneer on both sides of back	$15 50
8¼	Perforated Veneer Seet, Veneer on front side of back only	14 75
8½	Rattan Seat, Veneer on both sides of back	18 50
8¾	Plush Seat, Veneer on both sides of back	24 50

(LOCKS INCLUDED.)

CAR SEATS.



No. 9	Wood End, Veneer Seat, Veneer on both sides of back	$11 75
9½	" " " " Veneer on front side of back only	10 50
9¾	" " Rattan Seat, Veneer on both sides of back	14 00

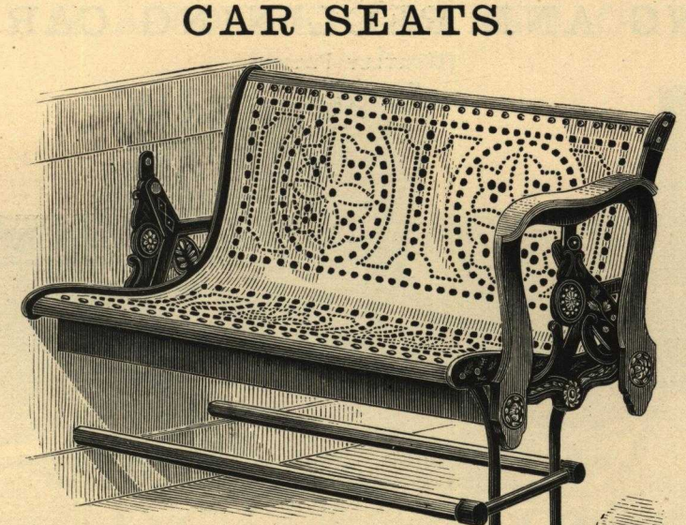
(LOCKS NOT INCLUDED.)

The frames of our Automatic Reversible Car Seats are made of Ash. Frames of other woods are made to order only. All our Car Seat Frames having our Patent Automatic Attachments are so constructed that any kind of seat can be used, without any alteration of the frame; for instance, Three-ply Veneer Seats or Cane Seats can be used in summer, and Plush or Upholstered Seats in winter.

PERFORATED VENEER CAR SEAT.

No. 10	Buntin's Ends,	Nickel Arm Rest,	Birch Seat	Each,	$12 50
10	"	" "	Silver Maple Seat	"	13 00
10	"	Wood "	Birch Seat	"	11 75
10	"	" "	Silver Maple Seat	"	12 25

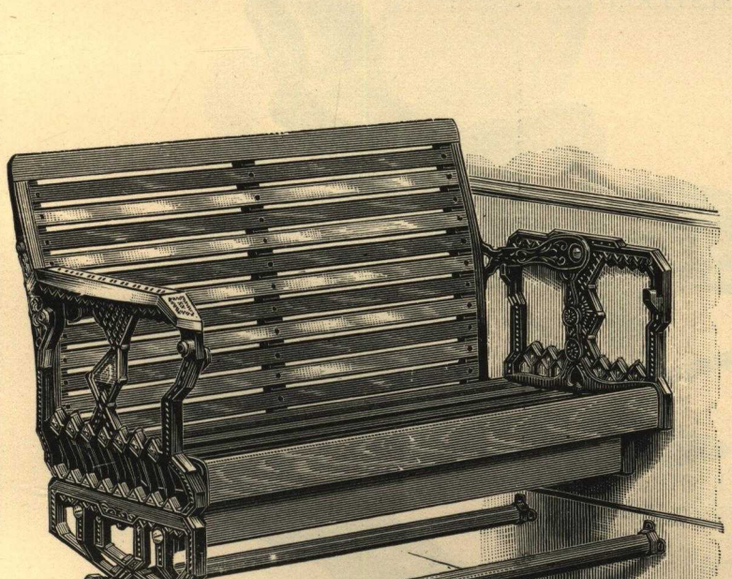
CAR SEATS.



PERFORATED VENEER CAR SEAT.

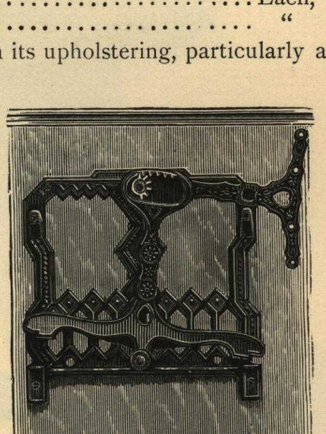
No. 15 Wood End, Birch Seat ..... Each, $10 50
15 " Silver Maple Seat ..... " 11 00

Particularly adapted for Smoking Cars and Suburban Trains, and from its upholstering, particularly adapted for warm climates.



EMIGRANT CAR SEAT.

No. 11 Slat Seat and Back ..... Each, $14 50



PATENT CAR SEAT ATTACHMENT.

(Cut shows Attachment on Seat end.)

Per Set $2 70

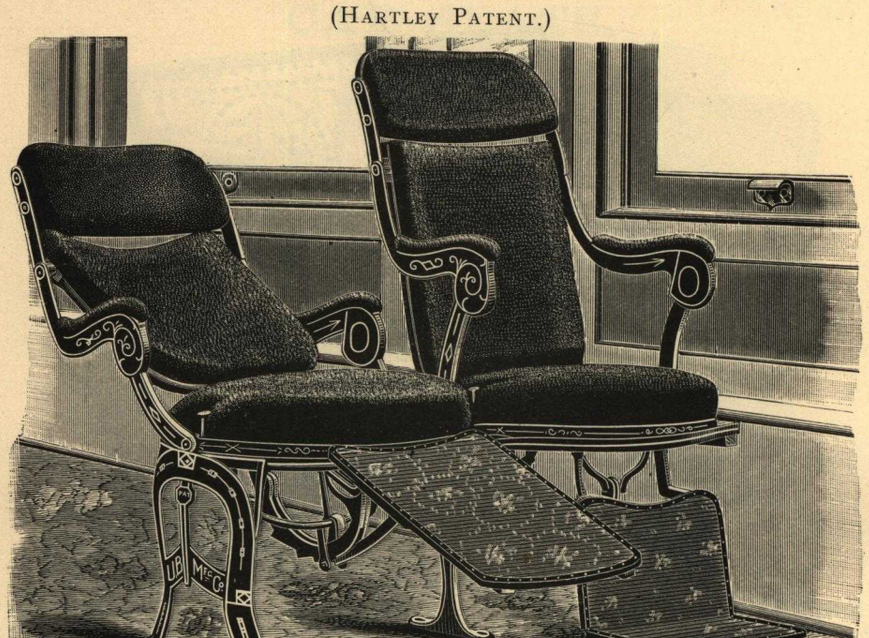
Patented Dec. 6, 1881.

This Attachment does not allow the back to rest against the seat, which is a great advantage, as it prevents the chafing of the plush or other covering. By reversing the back the seat is elevated 1½ inches in front, which gives comfort and prevents the passenger from slipping off the seat. Its construction is automatic, as the swing-arm at the top is geared to the striker-arm by cogs, and at the lower end has a journal which rests in a bearing, the bearing being on the journal only. The Attachment can be used with wood ends as well as iron.

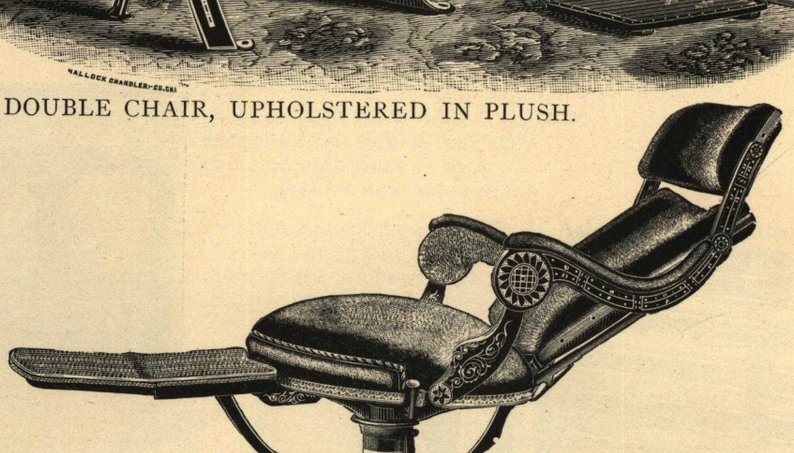
In ordering our Seats be sure to give measurement over all; and when ordering Veneer Seats specify kind of wood wanted, as we use Birch, Walnut and Mahogany veneers. Birch is the most serviceable. Mahogany is very handsome.

REVOLVING AND RECLINING CAR CHAIRS.

(HARTLEY PATENT.)



DOUBLE CHAIR, UPHOLSTERED IN PLUSH.

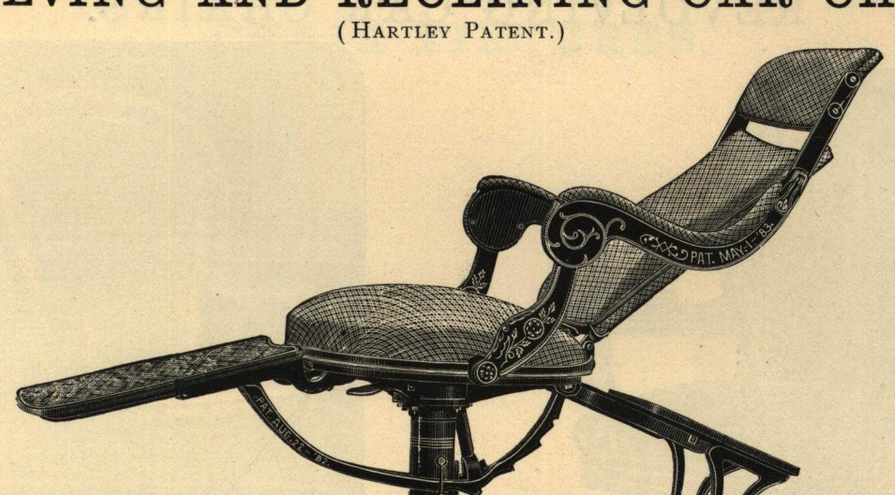


SINGLE CHAIR, HEAD-REST UP,
UPHOLSTERED IN PLUSH.

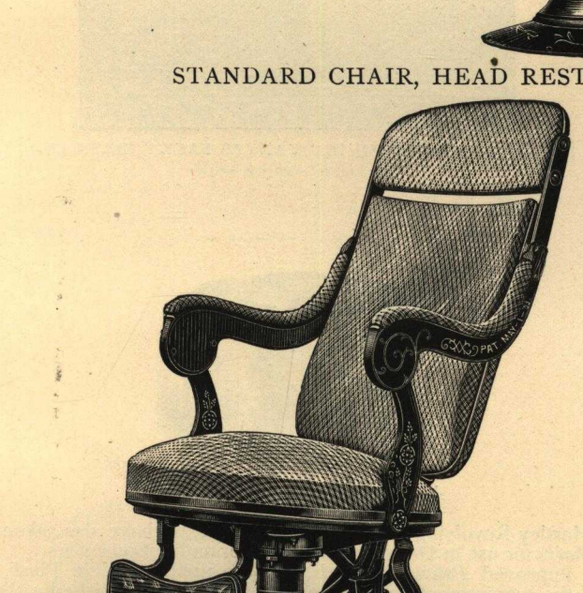
SINGLE CHAIR, HEAD-REST DOWN, UPHOLSTERED IN PLUSH.

REVOLVING AND RECLINING CAR CHAIRS.

(HARTLEY PATENT.)

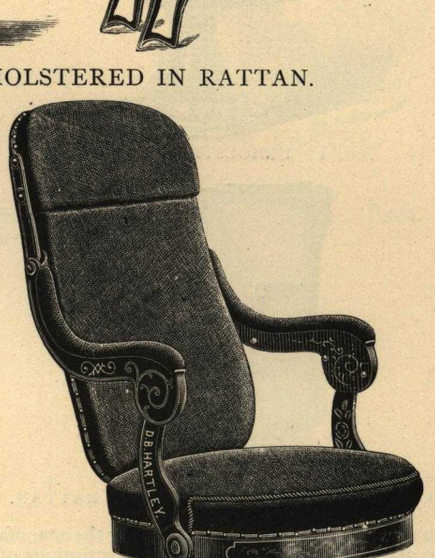


STANDARD CHAIR, HEAD REST UP, UPHOLSTERED IN RATTAN.



STANDARD CHAIR, UPRIGHT POSITION,

UPHOLSTERED IN RATTAN.



STANDARD CHAIR WITHOUT FOOT RESTS,

FOR SMOKING ROOMS AND SMALL COMPARTMENTS.

In many instances it is advisable to use this chair where economy of room is desirable. With it we furnish an Ottoman Foot Rest when ordered.

RECLINING AND REVOLVING CAR CHAIRS.

Having the sole right to manufacture Revolving and Reclining Car Chairs under the Hartley Patents (and all improvements thereof), we take pleasure in announcing that these Chairs are made in both *Single* and *Double* forms, the latter being especially adapted to supersede the present car seat, both Chairs being upon one frame, although separate and distinct in their mechanism and functions.

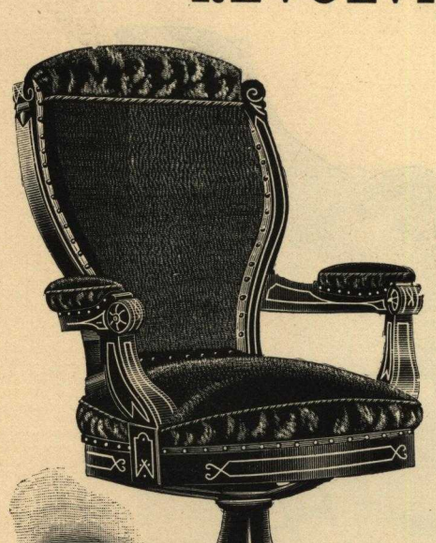
By the use of our Chairs a *greater width of aisle is obtained* than can be had by the use of any other Chair, the single pattern, when put four in a line, affording nearly as much aisle room as is at present allowed by the common form of Car Seat, whilst by using the double chair a *decided gain in aisle room* is obtained.

We upholster these as directed by purchaser, always keeping a stock of them on hand in a condition for covering, by which means requisitions can be filled at short notice.

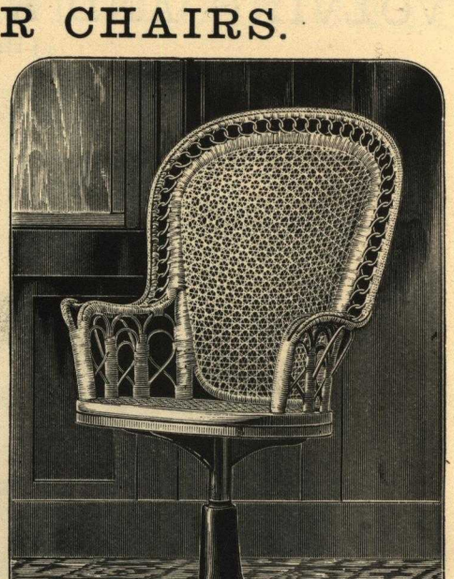
Especially do we call your attention to the fact that the vital parts of the Chair, and particularly those most liable to breakage, are made of *malleable iron*, the use of cast iron being avoided as far as possible; all of which, while it lightens the Chair, makes it stronger, and in the event of accident, there is much less liability of injury to passengers than in the ordinary way of constructing Car Chairs.

In presenting cuts of our Car Chairs, we beg your critical examination, and any information not set forth will be cheerfully furnished.

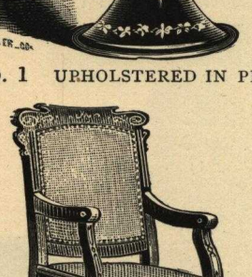
REVOLVING CAR CHAIRS.



No. 1 UPHOLSTERED IN PLUSH.



No. 2 UPHOLSTERED IN "CANVAS BACK" RATTAN.



No. 3 UPHOLSTERED IN CANE OR RATTAN.

No. 5 OTTOMAN FOOT REST.

In addition to our arrangements for the manufacture of the Hartley Revolving and Reclining Chairs, we have also taken up the manufacture of all kinds and descriptions of *Revolving Chairs* for use in Drawing Room, Parlor and Officers' Cars.

Our Revolving Chairs are mounted upon various and latest improved *Patent Pedestals*, and are upholstered in Plush, Cane, Canvas Back, Rattan, Oak or Birch Veneers, according to the requirements of our customers, and are furnished with or without linen covers as required. Our ordinary *Cast Iron Car Seat Frames of "Queen Anne" and "Eastlake" Pattern* are upholstered in like manner, and are furnished with or without seat locks, as required.

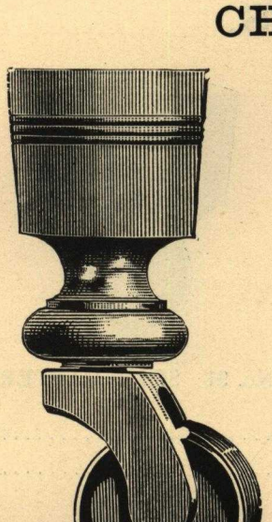
We shall be pleased to make estimates on any of above, or to show samples of our work whenever requested.

No. 17 PERFORATED PARLOR CAR CHAIR.

No. 17	Parlor Car Chair, Walnut Frame, Iron Base and Birch Seat	Each,	$10 00
17	Parlor Car Chair, Walnut Frame, Iron Base and Silver Maple Seat	"	10 50
	Engraved Lines on No. 17, Gilded, extra	"	50

No. 17 is particularly adapted for Smoking Cars and Suburban Trains, and from its upholstering, particularly adapted for warm climates.

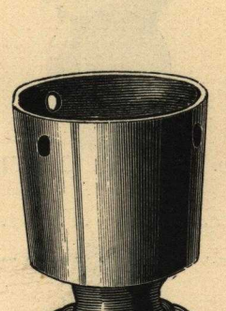
CHAIR FIXTURES.



No. 97 CHAIR CASTER.

WITH ROTARY SHEAVE.

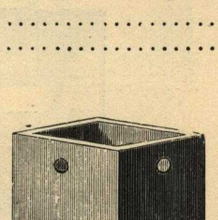
Brass	Each,	$0 95
Plated	"	1 15



No. 96 CHAIR CASTER.

(CHAIR LEG SOCKET.)

Brass	Each,	$0 60
Plated	"	75



No. 94 CHAIR CASTER.

WITH PIVOT.

(REVOLVING CHAIR STAND.)

Brass	Each,	$1 30
Plated	"	1 60

No. 1 CHAIR ARM PLATE.

Brass	Each,	$1 25
Nickel Plated	"	1 75
Silver	"	2 25

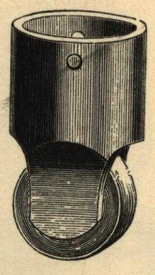
CHAIR CASTER PIVOT.

Brass	Each,	$0 20
Plated	"	25

MISCELLANEOUS CHAIR FIXTURES.

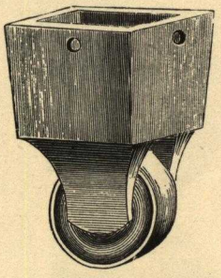
Chair Pedestals for Revolving Chairs, with Adjustable Hinge and Covered Base	Each,	$25 00
" " " Plain Iron Base and Spider	"	6 00
Chair Locks, Brass	"	50
" Plated	"	55
Chair Back Moulding, Brass	Per foot,	40
" " Plated	"	50
Chair Plates, Brass	"	30

SOFA FIXTURES.



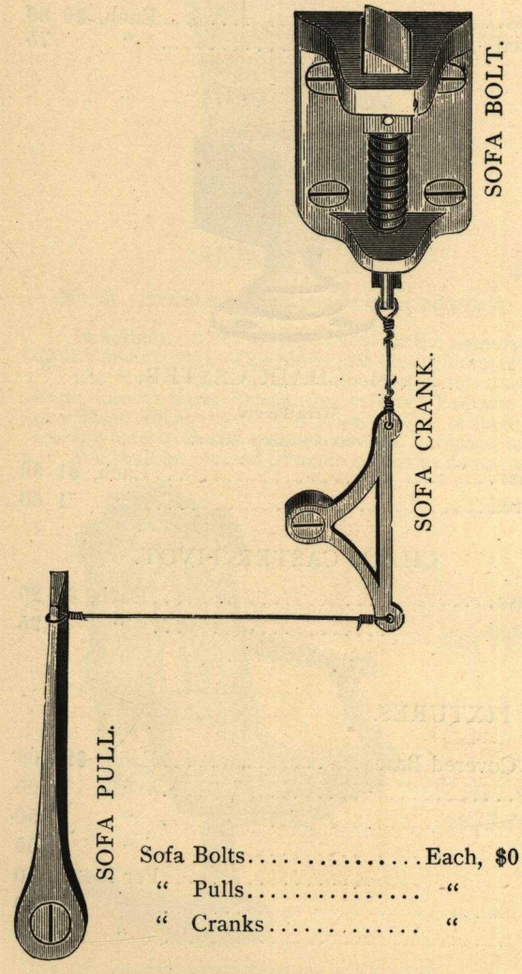
No. 90 SOFA CASTER.

Brass	Each,	$1 10
Plated	"	1 35

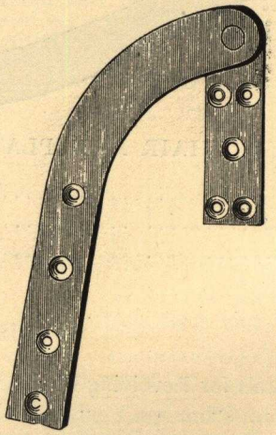


No. 91 SOFA CASTER.

Brass	Each,	$1 20
Plated	"	1 50



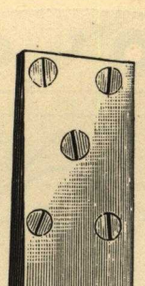
Sofa Bolts	Each,	$0 50
" Pulls	"	12
" Cranks	"	06



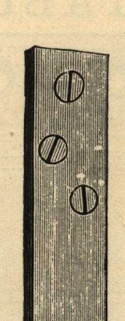
SOFA HINGE.

Iron	Each,	$0 50

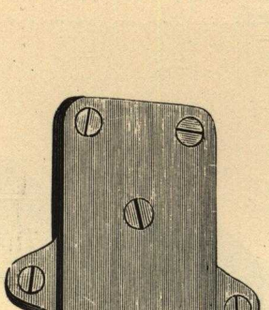
TABLE HOOKS.



No. 1 Brass.....Each, $0 20
1 Plated..... " 25



No. 2 Brass.....Each, $0 20
2 Plated..... " 25



No. 3 Brass.....Each, $0 40
3 Plated..... " 50

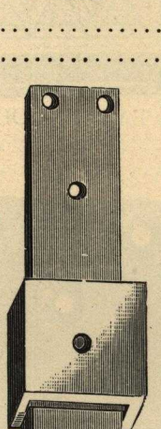


TABLE LEG HOOK.

No. 4 Brass.....Each, $0 65
4 Plated..... " 75

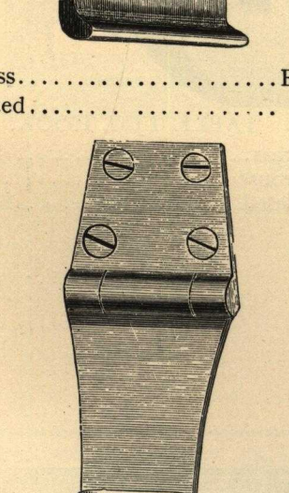


TABLE HOLDER.

No. 5 Brass.....Each, $0 75
5 Plated..... " 1 00

No. 6 Bronze.....Each, $0 50
6 Plated..... " 50

TABLE HOOKS AND PLATES.

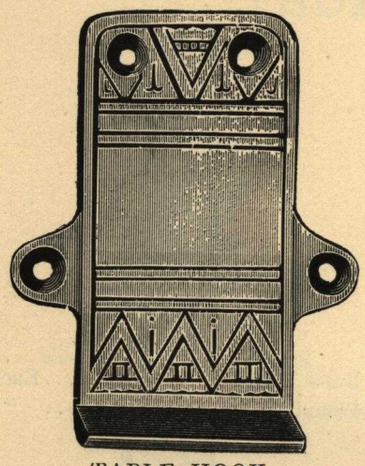


TABLE HOOK.

No. 7 Bronze ..... Each, $0 50
7 Plated ..... " 50

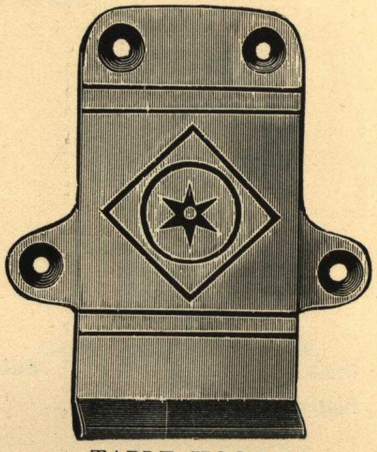


TABLE HOOK.

No. 8 Bronze ..... Each, $0 50
8 Plated ..... " 50

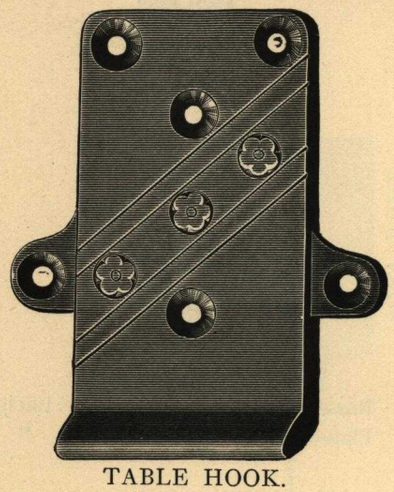


TABLE HOOK.

No. 9 Bronze ..... Each, $0 50
9 Plated ..... " 50

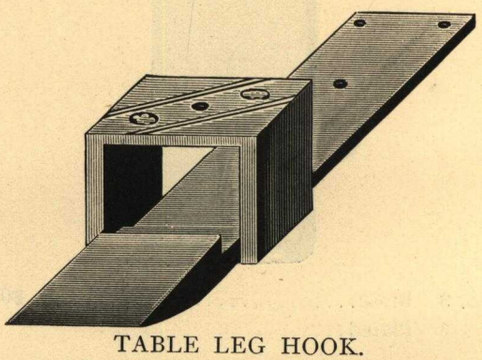


TABLE LEG HOOK.

No. 10 Brass ..... Each, $0 65
10 Bronze ..... " 75
10 Plated ..... " 75

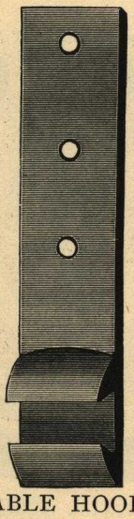


TABLE HOOK.

No. 11 Brass ..... Each, $0 40
11 Plated ..... " 50

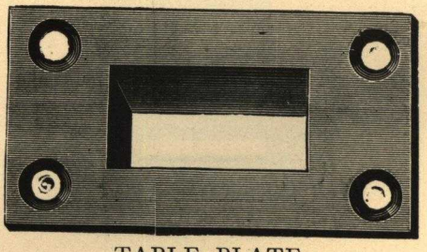
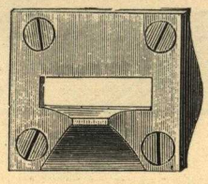


TABLE PLATE.

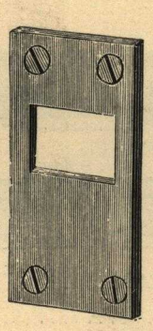
No. 11 Brass ..... Each, $0 40
11 Plated ..... " 50

TABLE PLATES.

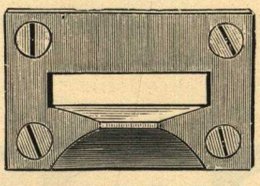
(TABLE HOOK PLATES.)



No. 1 Brass.....Each, $0 20
1 Plated..... " 25



No. 2 Brass.....Each, $0 20
2 Plated..... " 25



No. 3 Brass.....Each, $0 40
3 Plated..... " 50

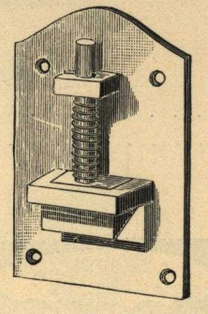
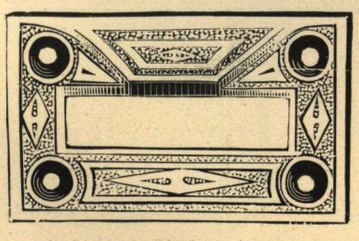
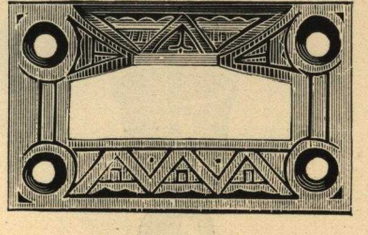


TABLE LEG PLATE.

No. 4 Brass.....Each, $0 75



No. 6 Bronze .....Each, $0 50
6 Plated..... " 50



No. 7 Bronze .....Each, $0 50
7 Plated..... " 50

TABLE FIXTURES.

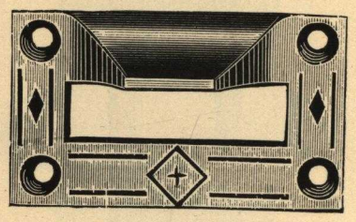


TABLE PLATE.

No. 8 Bronze ..... Each, $0 50
8 Plated ..... " 50

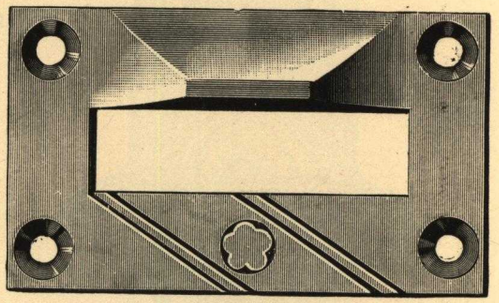
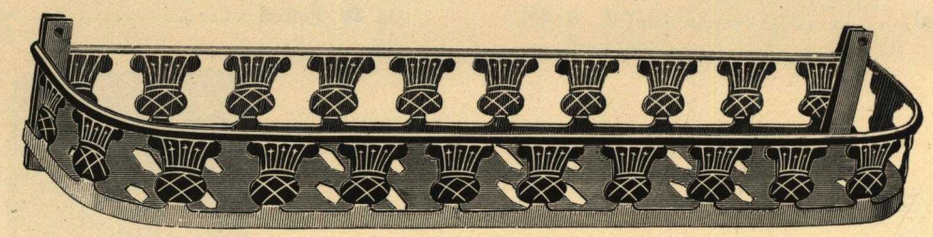


TABLE PLATE.

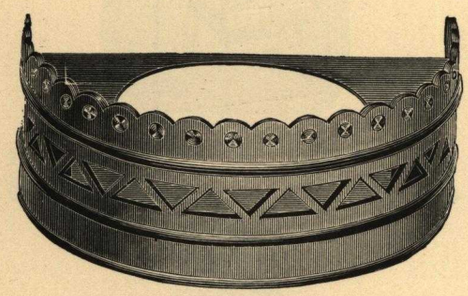
No. 9 Bronze ..... Each, $0 50
9 Plated ..... " 50



CASTER HOLDER.

17 x 4 Inches.

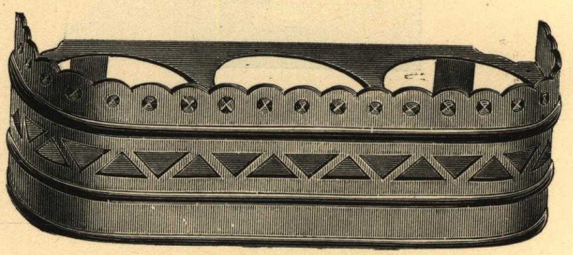
No. 5 Bronze ..... Each, $5 00
5 Plated ..... " 5 00



CASTER HOLDER.

6 x 3¾ Inches.

No. 6 Bronze ..... Each, $4 00
6 Plated ..... " 4 00



CASTER HOLDER.

7¼ x 3 Inches.

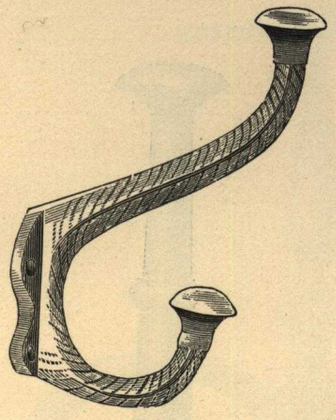
No. 7 Bronze ..... Each, $4 50
7 Plated ..... " 4 50

No. 92 TABLE CASTER.

No. 92 TABLE CASTER.

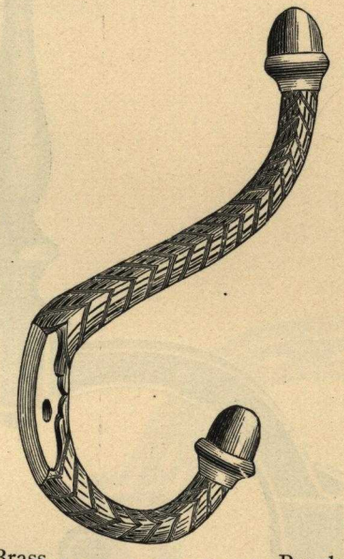
Brass ..... Each, $0 50
Plated ..... " 60

COAT AND HAT HOOKS.

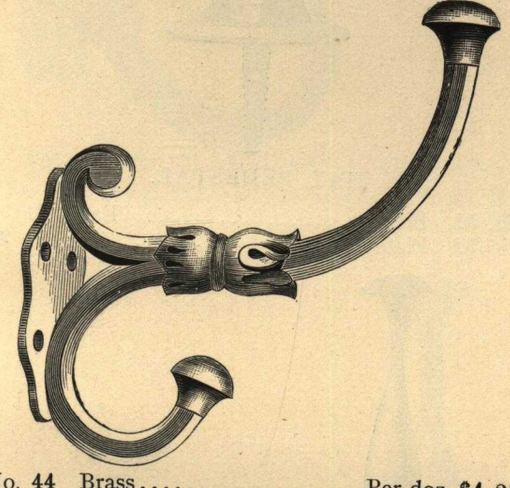


No.		Per doz.	No.		Per doz.
42	Brass	$3 00	42	Japanned	$1 60
42	Plated	3 50	45	Brass	4 25
42	Burred and Dipped	2 60	45	Plated	5 00

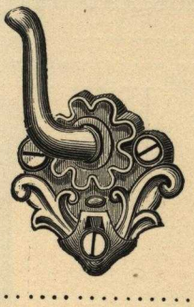
No. 45 same shape as No. 42, Burnished.



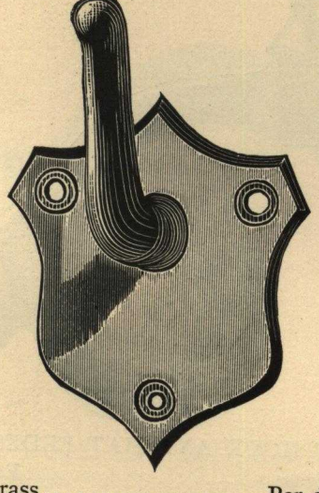
No. 43	Brass	Per doz.	$3 00
43	Plated	"	3 50
43	Burred and Dipped	"	2 50
43	Japanned	"	1 50



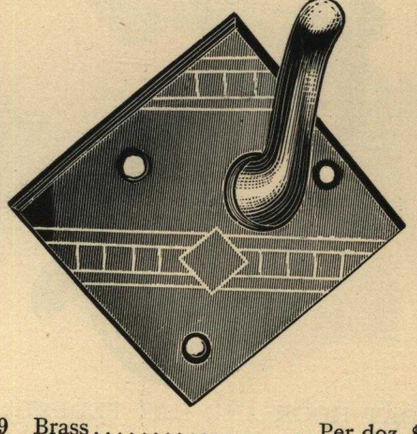
No. 44	Brass	Per doz.	$4 25
44	Plated	"	5 00
44	Japanned	"	2 00



No. 47	Brass	Per doz.	$3 50
47	Plated	"	4 25



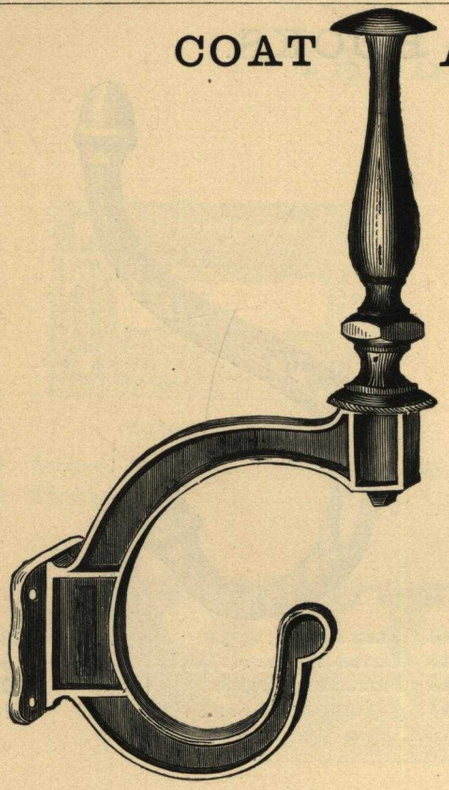
No. 48	Brass	Per doz.	$3 90
48	Plated	"	4 75



No. 49	Brass	Per doz.	$3 90
49	Plated	"	4 75
49	Bronze	"	4 75

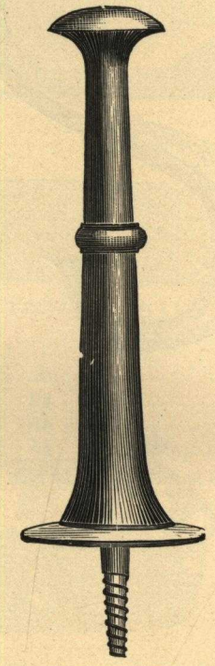
COAT AND HAT HOOKS.

(HAT POST AND HOOK COMBINED.)



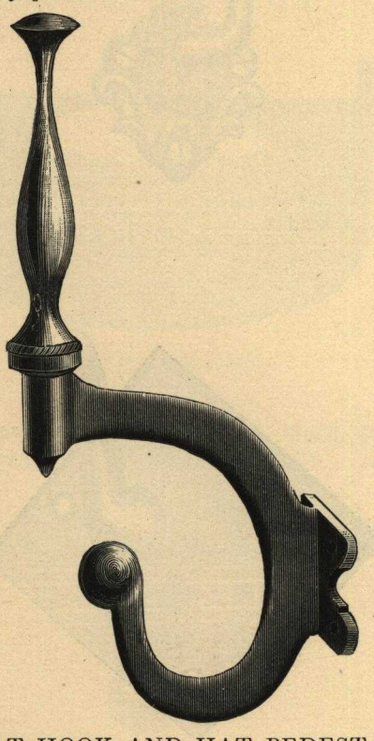
COAT HOOK AND HAT PEDESTAL.

No. 50	Brass	Each,	$1 20
50	Plated	"	1 50
50	Japanned	"	30



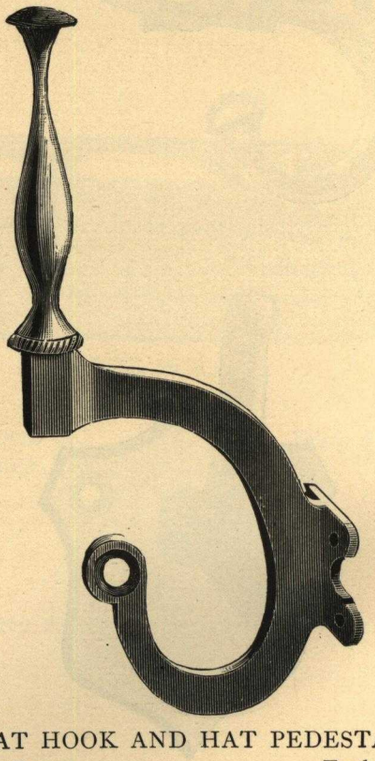
HAT PEDESTAL.

No. 52	Brass	Each,	$1 00
52	Plated	"	1 20



COAT HOOK AND HAT PEDESTAL.

No. 53	Brass	Each,	$1 20
53	Bronze	"	1 50
53	Plated	"	1 50

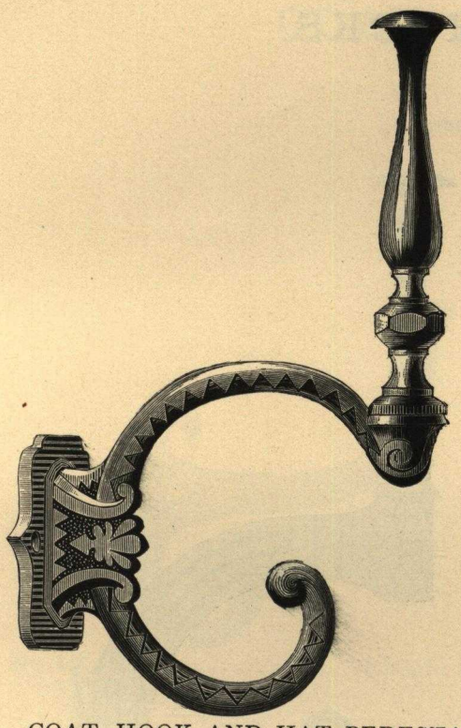


COAT HOOK AND HAT PEDESTAL.

No. 54	Brass	Each,	$1 20
54	Bronze	"	1 50
54	Plated	"	1 50

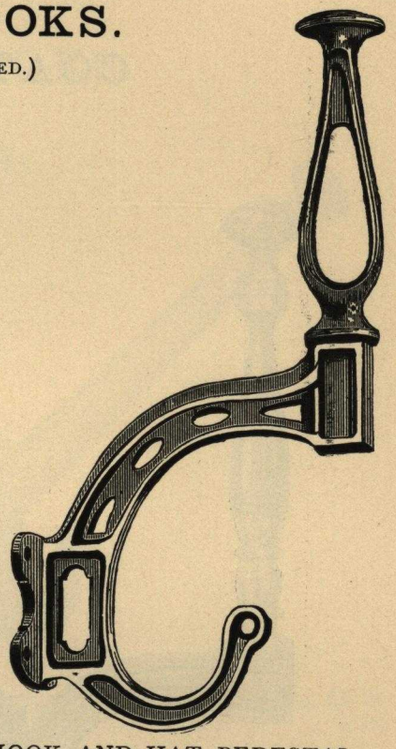
COAT AND HAT HOOKS.

(HAT POST AND HOOK COMBINED.)



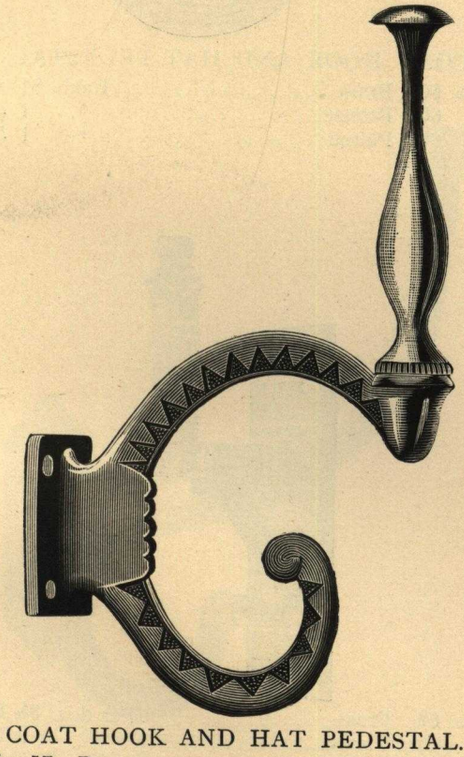
COAT HOOK AND HAT PEDESTAL.

No. 55	Brass	Each,	$1 00
55	Bronze	"	1 30
55	Plated	"	1 30



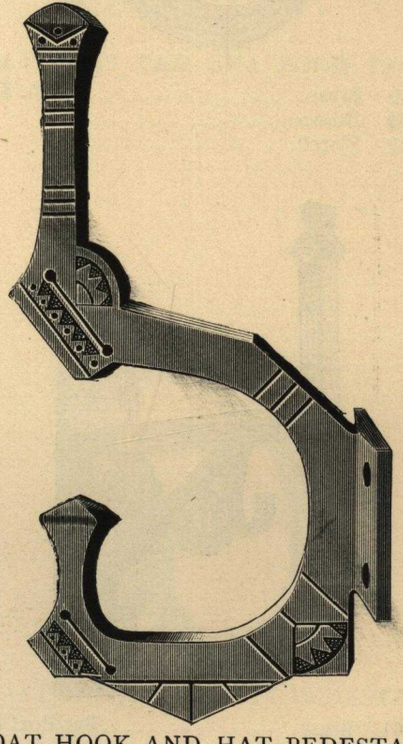
COAT HOOK AND HAT PEDESTAL.

No. 56	Brass	Each,	$0 85
56	Plated	"	1 10
56	Bronze	"	1 10
56	Japanned	"	30



COAT HOOK AND HAT PEDESTAL.

No. 57	Brass	Each,	$1 00
57	Bronze	"	1 30
57	Plated	"	1 30

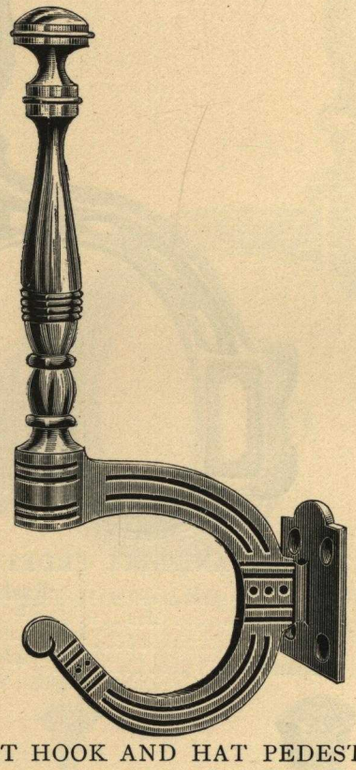


COAT HOOK AND HAT PEDESTAL.

No. 58	Brass	Each,	$1 00
58	Bronze	"	1 30
58	Plated	"	1 30

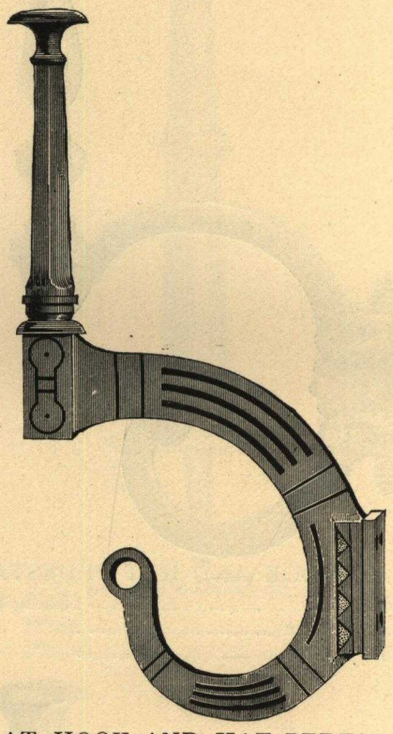
COAT AND HAT HOOKS.

(HAT POST AND COAT HOOK COMBINED.)



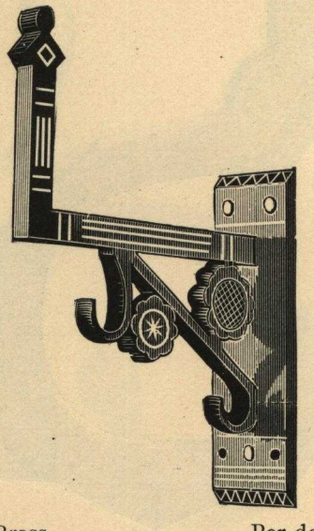
COAT HOOK AND HAT PEDESTAL.

No. 59	Brass	Each,	$1 20
59	Bronze	"	1 50
59	Plated	"	1 50

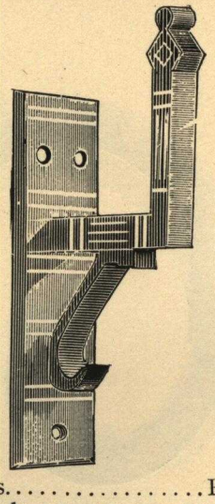


COAT HOOK AND HAT PEDESTAL.

No. 60	Brass	Each,	$1 20
60	Bronze	"	1 50
60	Plated	"	1 50

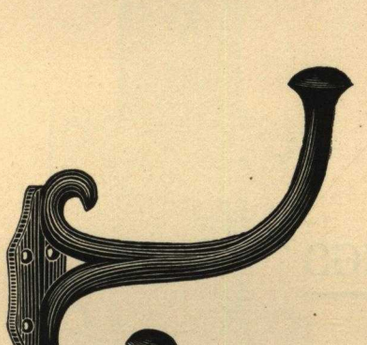


No. 61	Brass	Per doz.	$8 00
61	Plated	"	9 00
61	Bronze	"	9 00

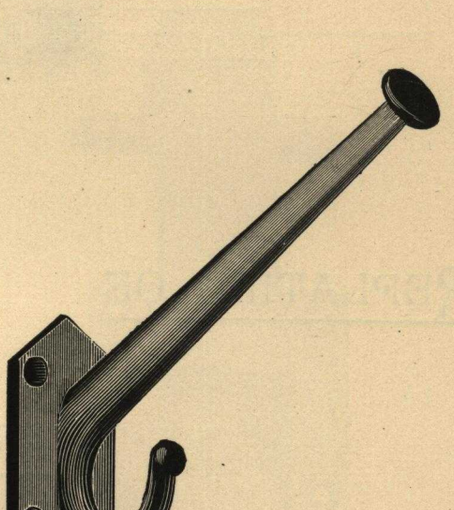


No. 62	Brass	Per doz.	$8 00
62	Plated	"	9 00
62	Bronze	"	9 00

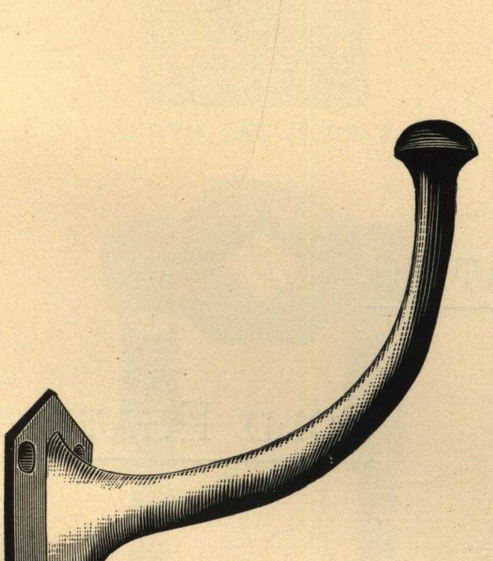
COAT AND HAT HOOKS.



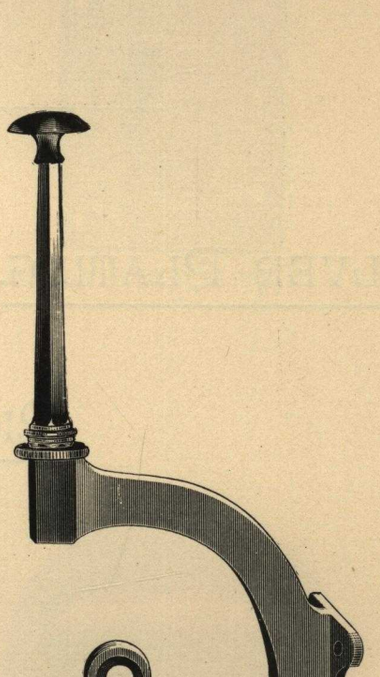
No. 63 Brass.....Per doz. $4 00
63 Plated..... " 4 50



No. 64 Brass.....Per doz. $6 00
64 Plated..... " 8 00



No. 65 Brass.....Per doz. $7 00
65 Plated..... " 9 00



COAT HOOK AND HAT PEDESTAL.

No. 66 Brass.....Each, $1 20
66 Bronze..... " 1 50
66 Plated..... " 1 50

REPLATING OF

CAR TRIMMINGS

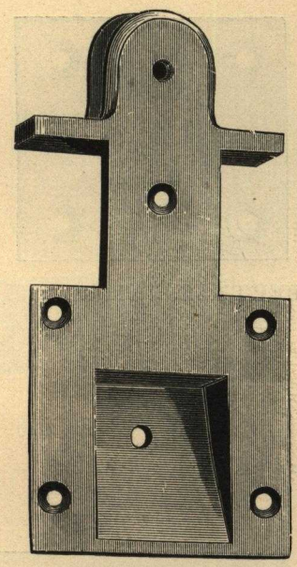
A SPECIALTY.

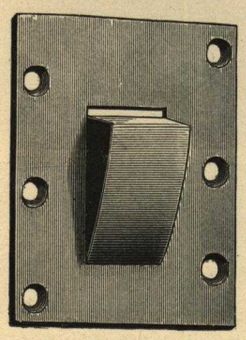
SILVER PLATING.

NICKEL PLATING.

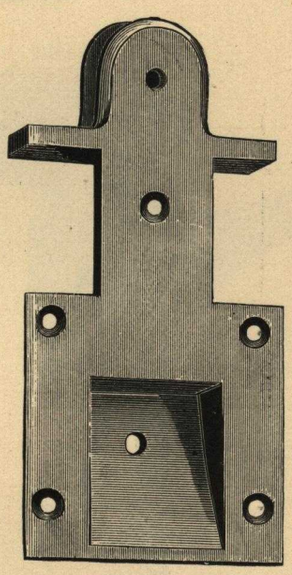
GOLD PLATING.

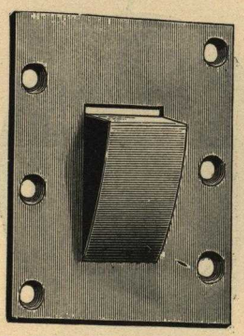
BERTH FIXTURES.



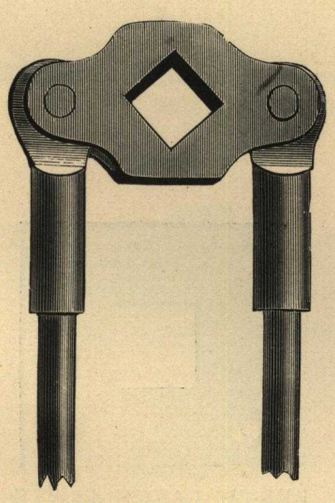


BERTH LATCH BOLT.

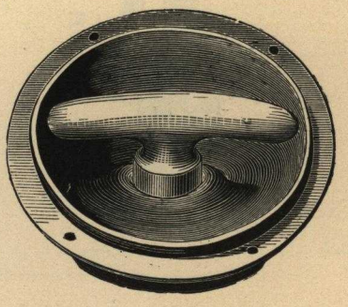




BERTH LATCH BOLT.



BERTH LATCH LEVER.

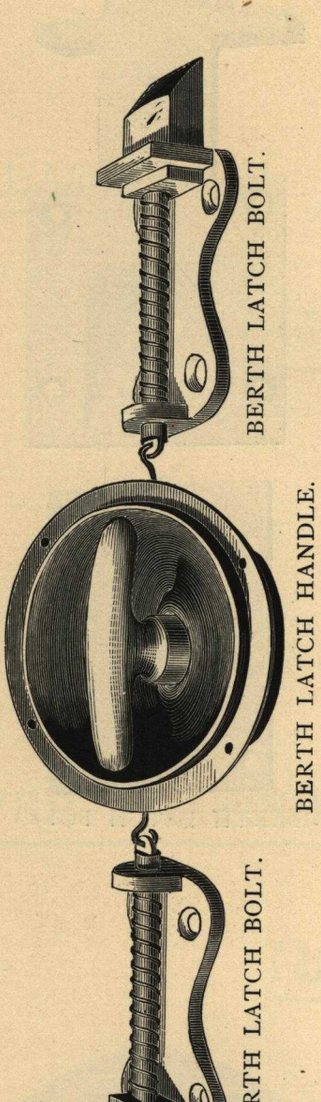


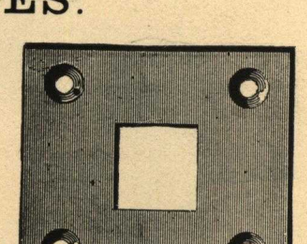
BERTH LATCH HANDLE

No. 3 BERTH LOCK.

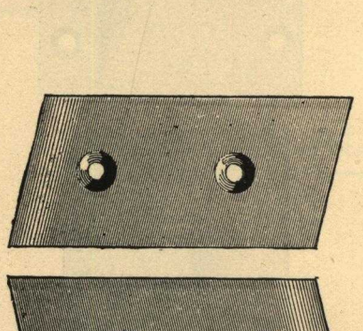
With Bolts, Plates, Joints and Flush Handle, Plated.....Per set, **$6 00**

BERTH FIXTURES.

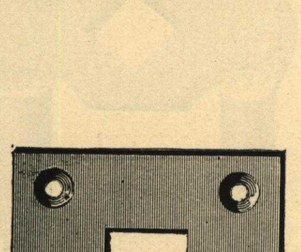




BERTH LATCH PLATE.



BERTH LATCH PLATES.

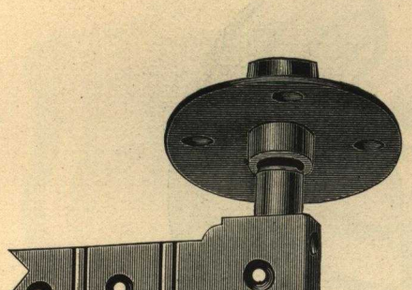


BERTH LATCH PLATE.

No. 1 BERTH LOCK.

With Bolts, Plates and Flush Handle, Plated..... Each, $3 50
Berth Lock, Flush Handle only, Plated..... " 2 20

BERTH FIXTURES.

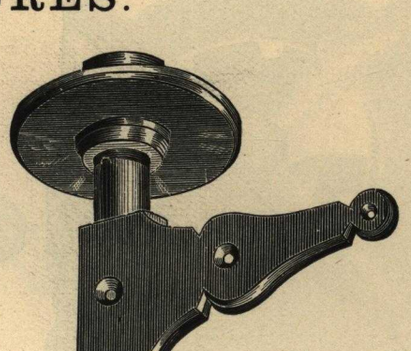


FOGG'S PATENT.

No. 4 BERTH HINGE.

LOOSE.

Brass	Per pair,	$2 50
Bronze	"	3 00
Plated	"	3 00

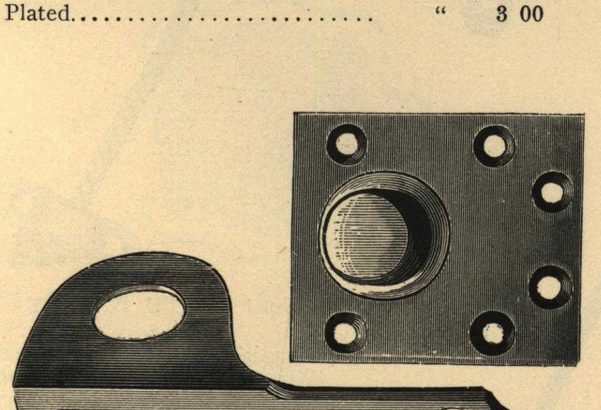


FOGG'S PATENT.

No. 3 BERTH HINGE.

LOOSE.

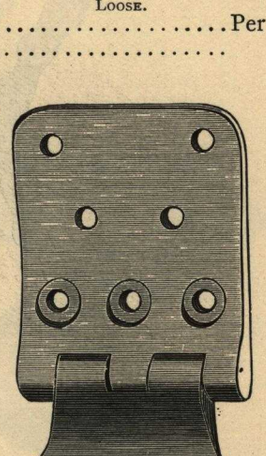
Brass	Per pair,	$2 50
Plated	"	3 00



No. 2 BERTH HINGE.

LOOSE.

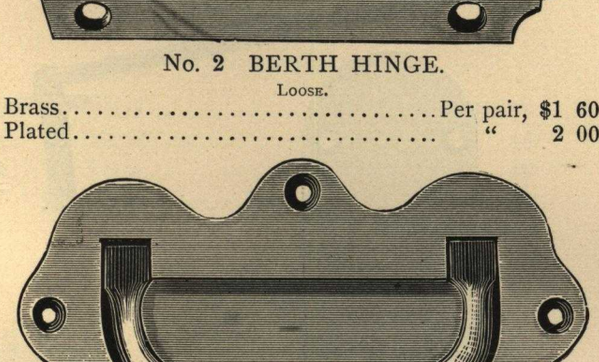
Brass	Per pair,	$1 60
Plated	"	2 00



No. 1 BERTH HINGE.

FAST.

Brass	Per pair,	$2 00
Plated	"	2 30

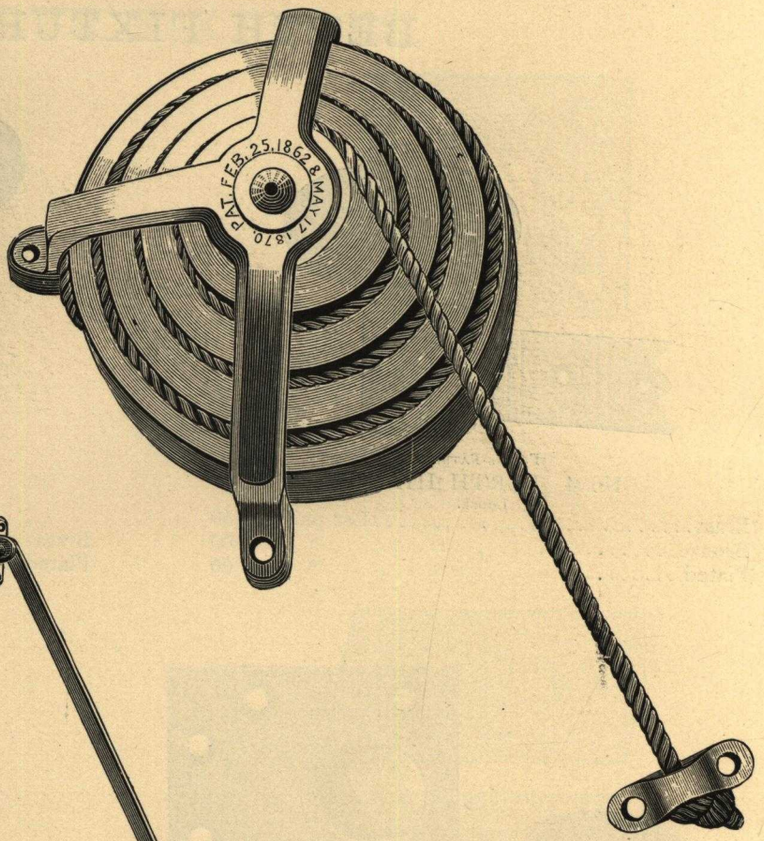


No. 5 BERTH HANDLE.

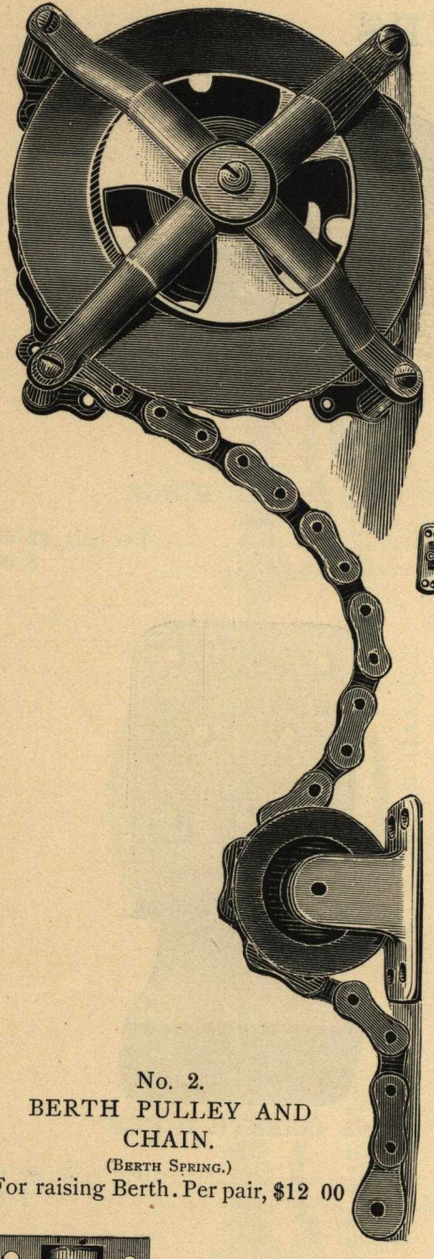
No. 5 BERTH HANDLE.

Brass	Each,	$1 75
Plated	"	2 00

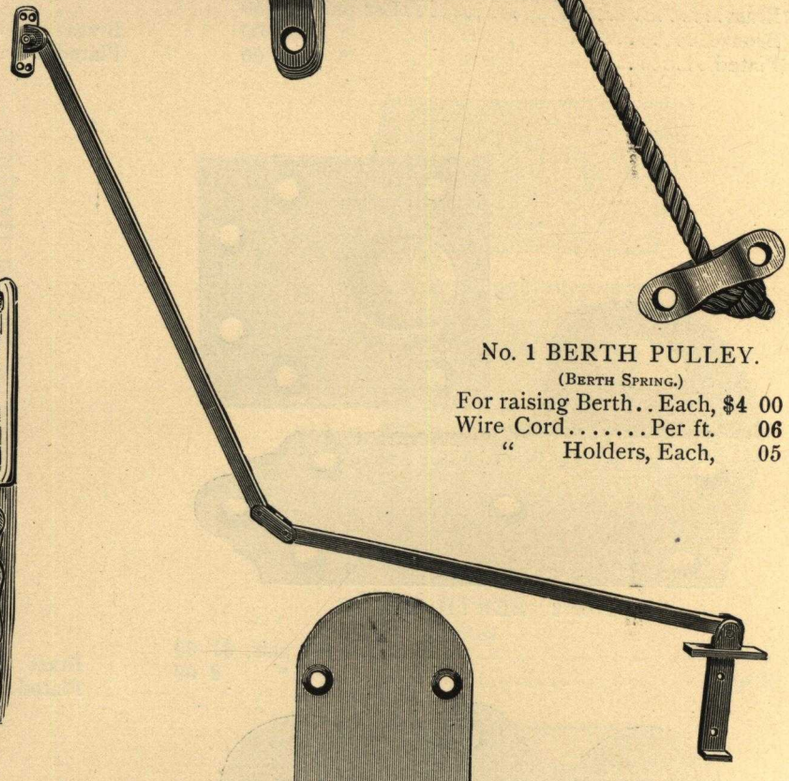
BERTH PULLEYS.



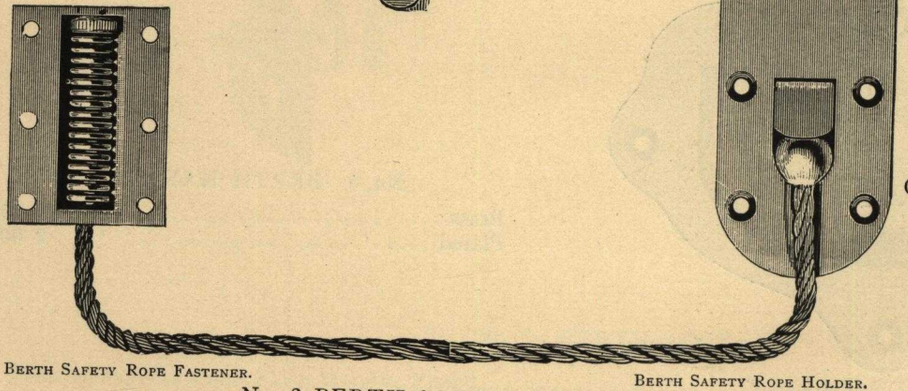
No. 1 BERTH PULLEY.
(BERTH SPRING.)
For raising Berth..Each, $4 00
Wire Cord.....Per ft. 06
" Holders, Each, 05



No. 2.
BERTH PULLEY AND CHAIN.
(BERTH SPRING.)
For raising Berth. Per pair, $12 00



BERTH ARM.
(BERTH BRACE AND JOINT.)
Complete .....Each, $2 75



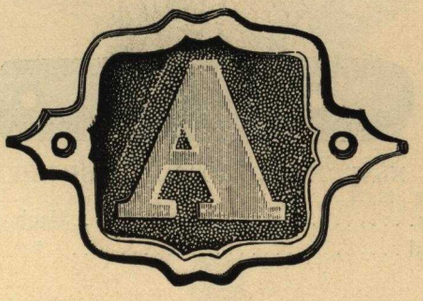
BERTH SAFETY ROPE FASTENER. BERTH SAFETY ROPE HOLDER.

No. 3 BERTH SAFETY HOLDER.
Complete.....Each, $1 25

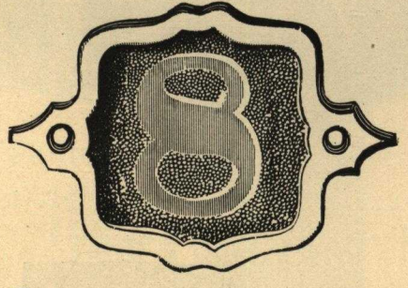
BERTH NUMBERS AND LETTERS.

WITH POCKET.

No. 1 Brass ..... Each, $1 30
1 Plated ..... " 1 50



No. 4 Brass ..... Each, $0 25
4 Plated ..... " 35

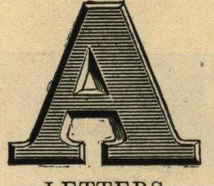


No. 3 Brass ..... Each, $0 25
3 Plated ..... " 35

No. 2 Brass ..... Each, $0 20
2 Plated ..... " 30

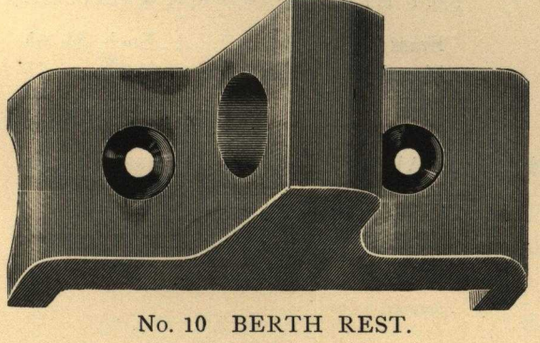
FIGURES.

½ inch, Brass ..... Each, $0 08
½ " Plated ..... " 10
1 " Brass ..... " 10
1 " Plated ..... " 14



LETTERS.

½ inch, Brass ..... Each, $0 08
½ " Plated ..... " 10
1 " Brass ..... " 10
1 " Plated ..... " 14



No. 10 BERTH REST.

BERTH REST.

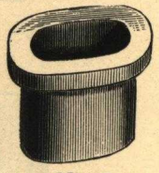
No. 10 Brass ..... Each, $0 60
10 Bronze ..... " 75
10 Plated ..... " 75

HEAD BOARD FIXTURES.

No. 7 HEAD BOARD BUSHING.

Brass	Each,	$0 80
Plated	"	90

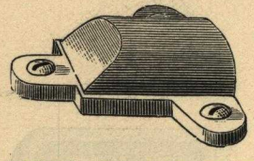
No. 1.



No. 2.

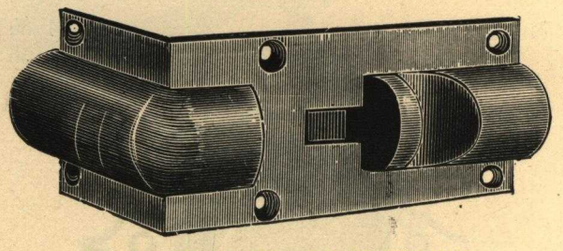
HEAD BOARD BUSHING.

No. 1	Brass	Each,	$0 15
1	Plated	"	18
2	Brass	"	17
2	Plated	"	20



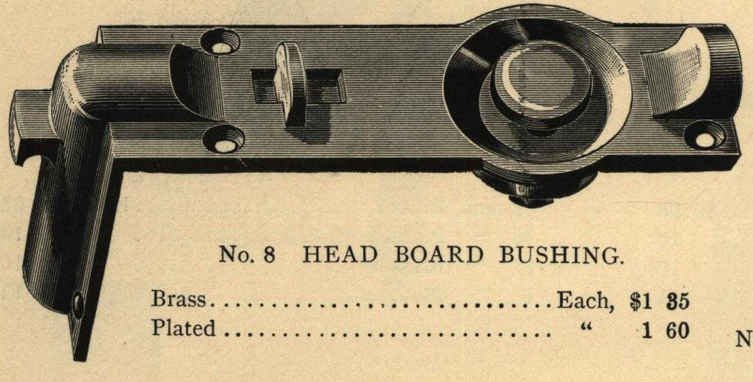
No. 4 HEAD BOARD BUSHING.

Brass	Each,	$0 20
Plated	"	25



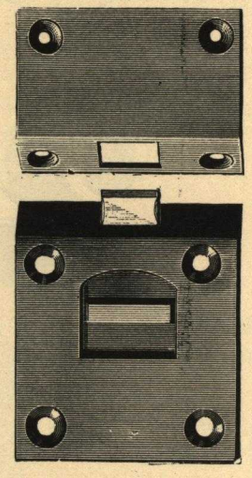
No. 3 HEAD BOARD BUSHING.

Brass	Each,	$1 10
Plated	"	1 35



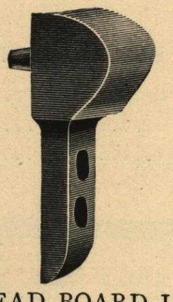
No. 8 HEAD BOARD BUSHING.

Brass	Each,	$1 35
Plated	"	1 60



No. 1 HEAD BOARD RACK CATCHES.

Brass	Each,	$0 65
Plated	"	75

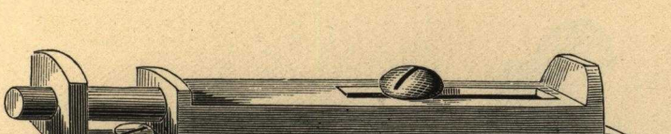


No. 1 HEAD BOARD LUG.

Brass	Each,	$0 15
Plated	"	20

No. 1 HEAD BOARD LUG.

HEAD BOARD FIXTURES.

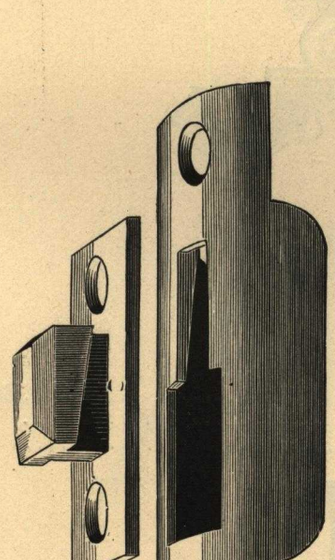


HEAD BOARD BOLT.

No. 1	Brass	Each,	$0 40
1	Plated	"	50
2	Brass	"	45
2	Plated	"	55

HEAD BOARD BOLT.

No. 3	Brass	Each,	$0 90
3	Plated	"	1 00

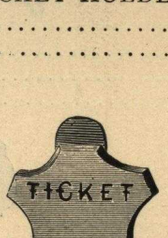


HEAD BOARD COUPLING.

No. 1	Brass	Each,	$0 40
1	Plated	"	50

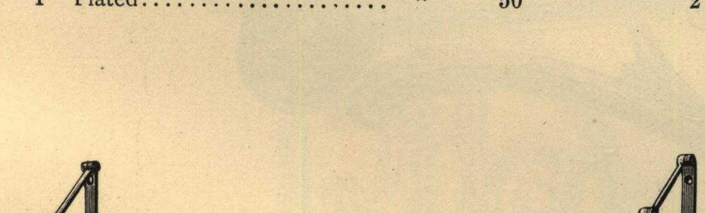
TICKET HOLDER.

No. 1	Brass	Per doz.	$0 75
1	Plated	"	1 15



TICKET HOLDER.

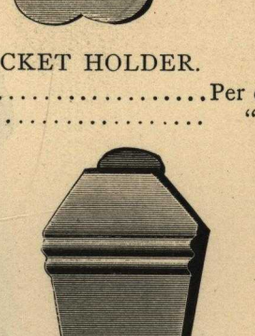
No. 2	Brass	Per doz.	1 60
2	Plated	"	2 25



HEAD BOARD RACK.

20 x 6 INCHES.

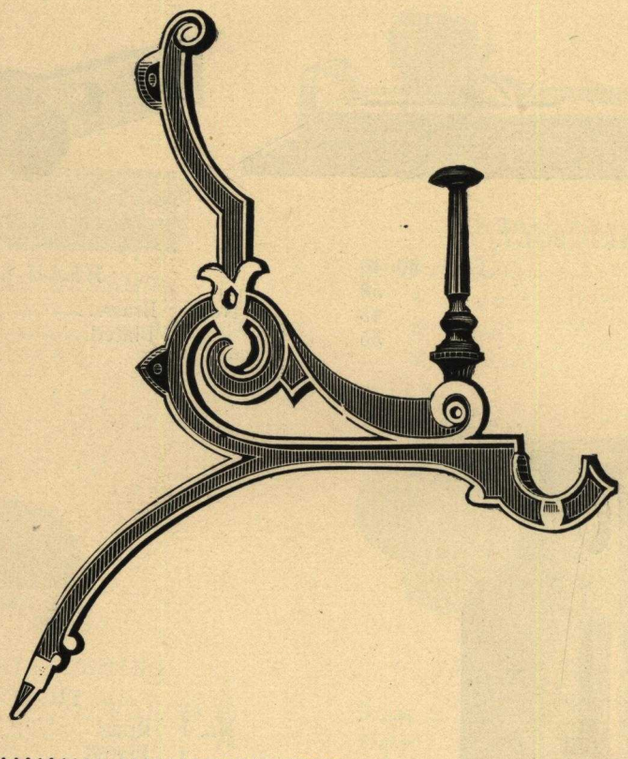
No. 68	Brass	Each,	2 50
68	Plated	"	3 00



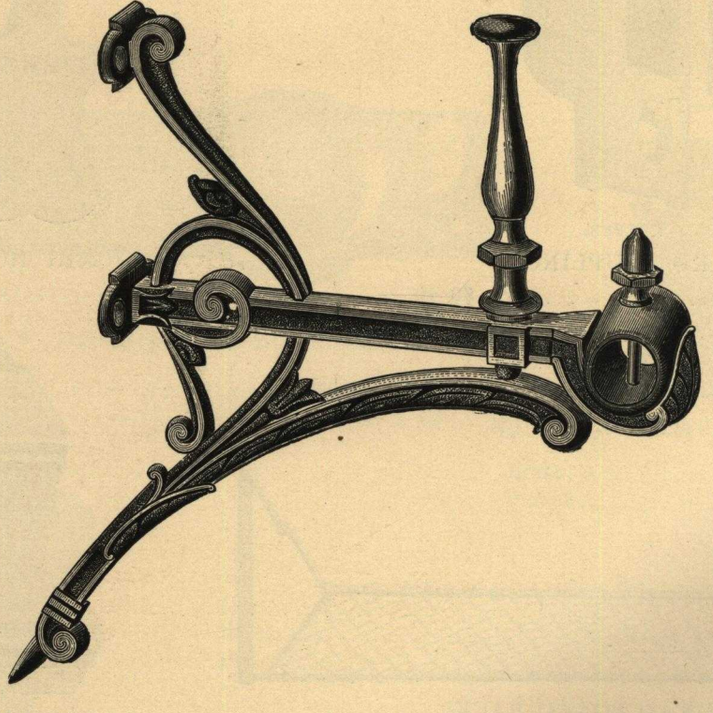
TICKET HOLDER.

No. 3	Brass	Per doz.	$1 75
3	Plated	"	2 35

BERTH CURTAIN ROD BRACKETS.

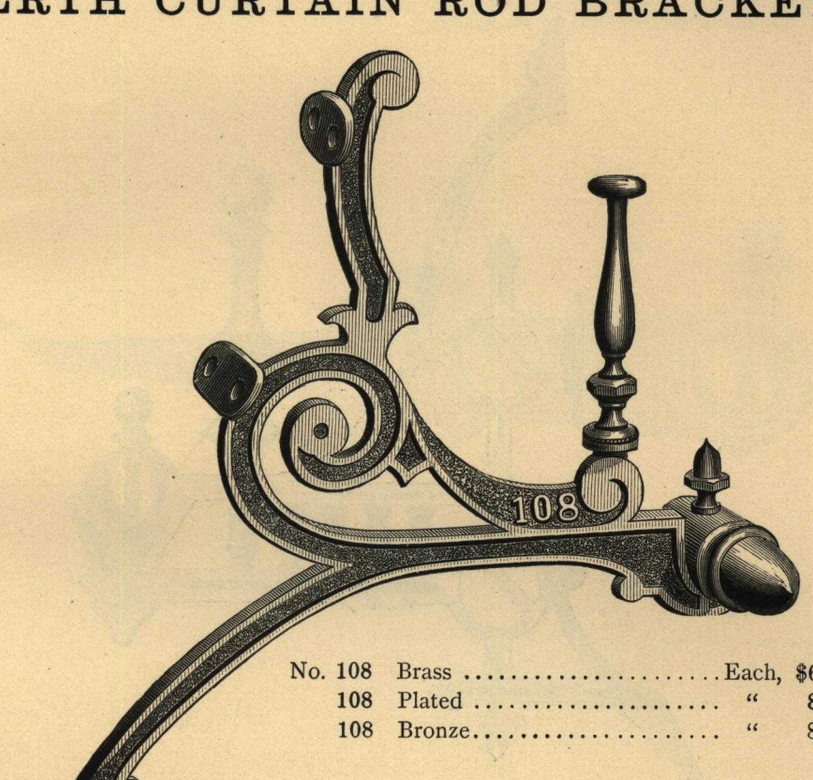


No. 103	Brass	Each,	$6 50
103	Plated	"	8 00
103	Bronze	"	8 00

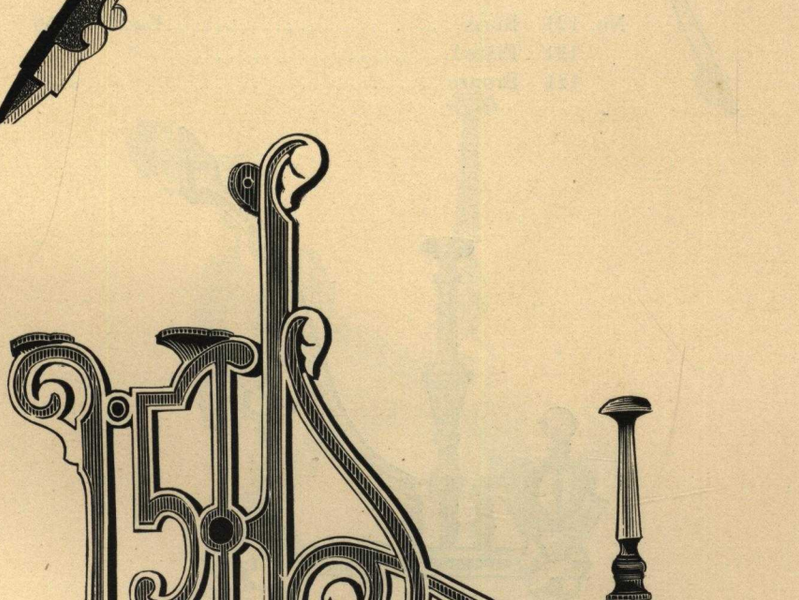


No. 107	Brass	Each,	$6 50
107	Plated	"	7 50
107	Bronze	"	7 50

BERTH CURTAIN ROD BRACKETS.

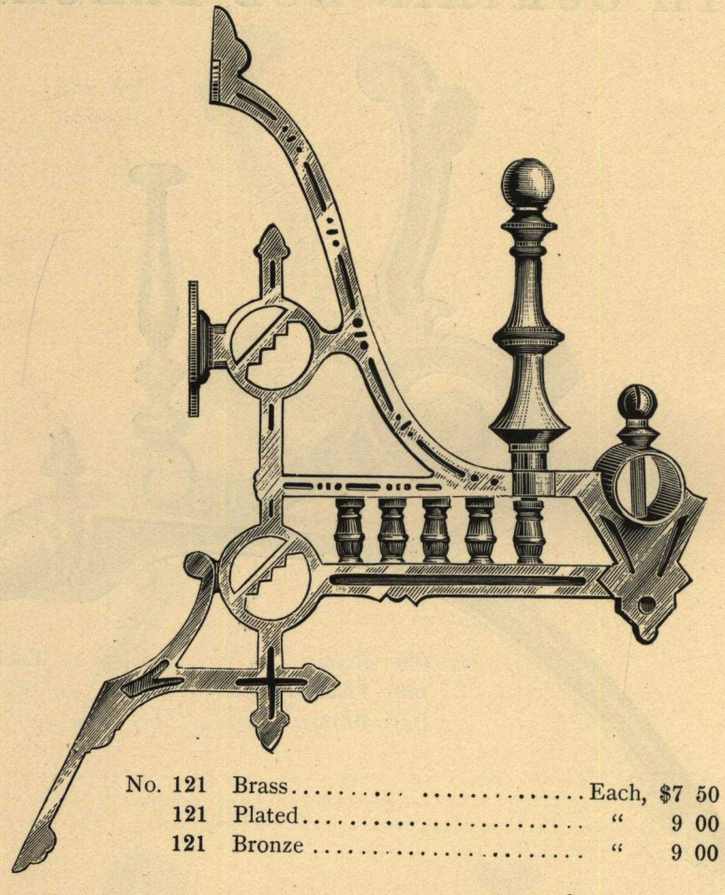


No. 108	Brass	Each,	$6 50
108	Plated	"	8 00
108	Bronze	"	8 00

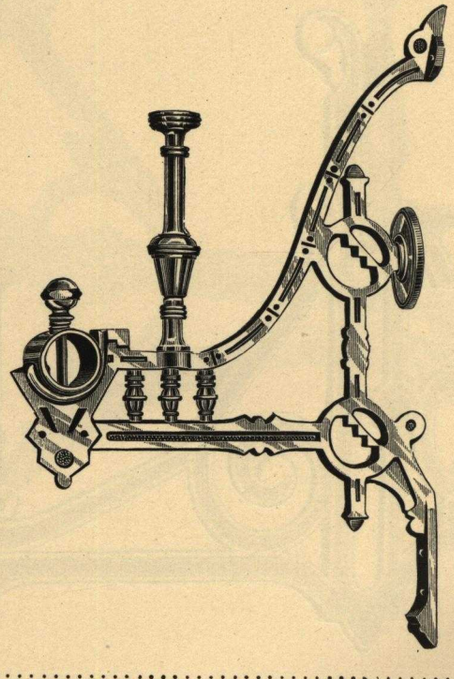


No. 120	Brass	Each,	$7 50
120	Plated	"	9 00
120	Bronze	"	9 00

BERTH CURTAIN ROD BRACKETS.

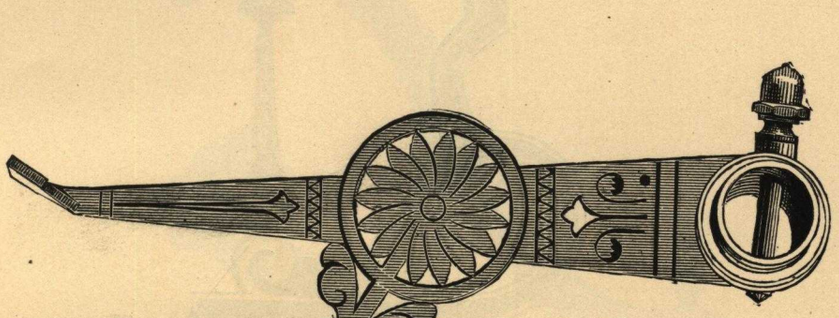


No. 121	Brass	Each,	$7 50
121	Plated	"	9 00
121	Bronze	"	9 00

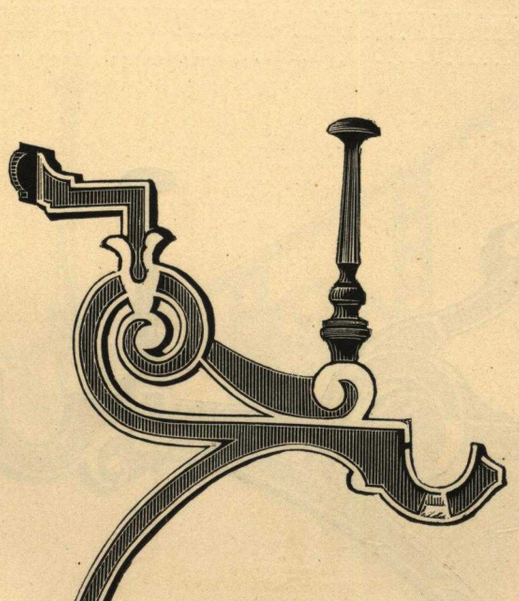


No. 127	Brass	Each,	$7 50
127	Bronze	"	9 00
127	Plated	"	9 00

BERTH CURTAIN ROD BRACKETS.

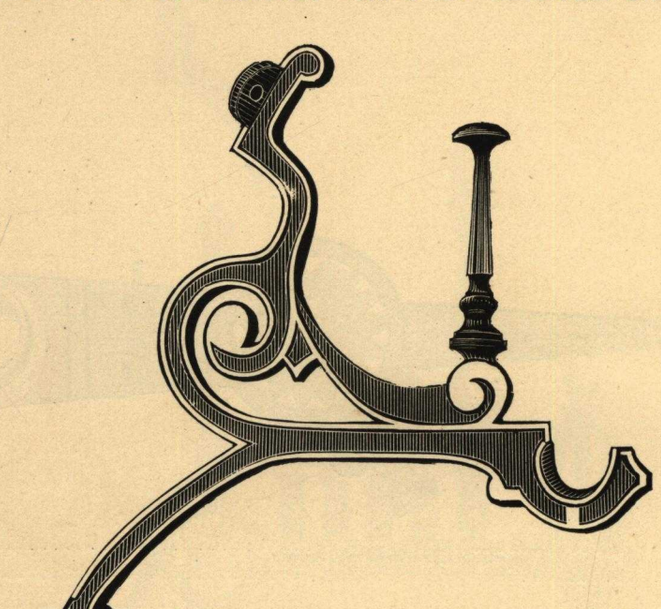


No. 122	Brass	Each,	$5 50
122	Plated	"	6 50
122	Bronze	"	6 50

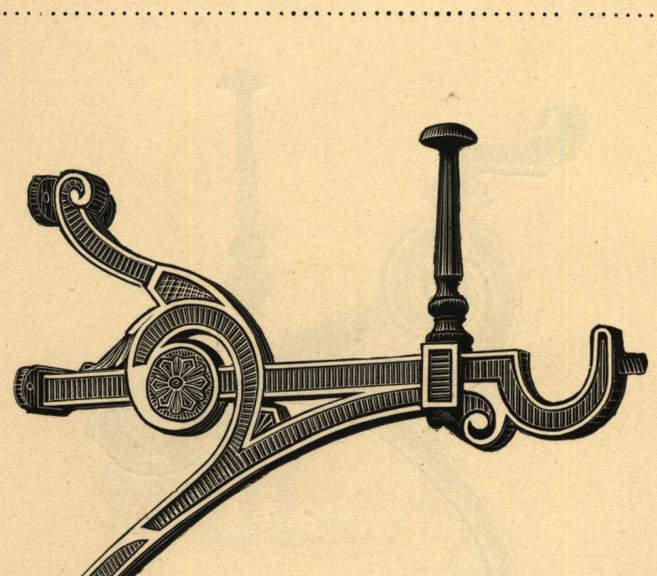


No. 123	Brass	Each,	$6 50
123	Plated	"	8 00
123	Bronze	"	8 00

BERTH CURTAIN ROD BRACKETS.

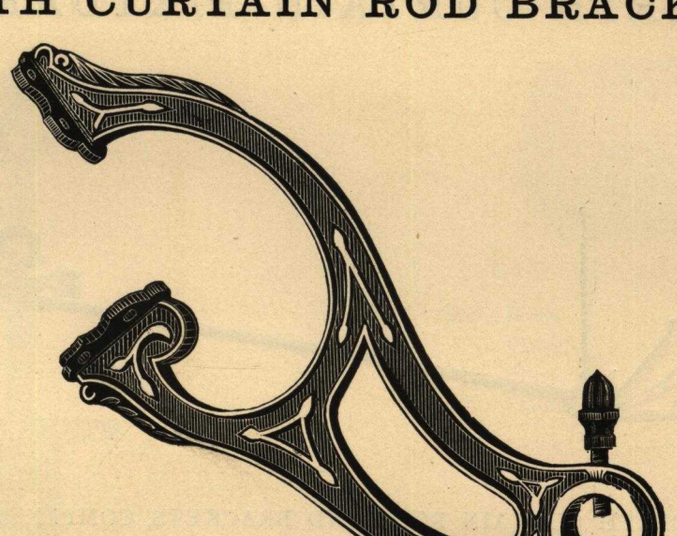


No. 124	Brass	Each,	$6 50
124	Plated	"	8 00
124	Bronze	"	8 00

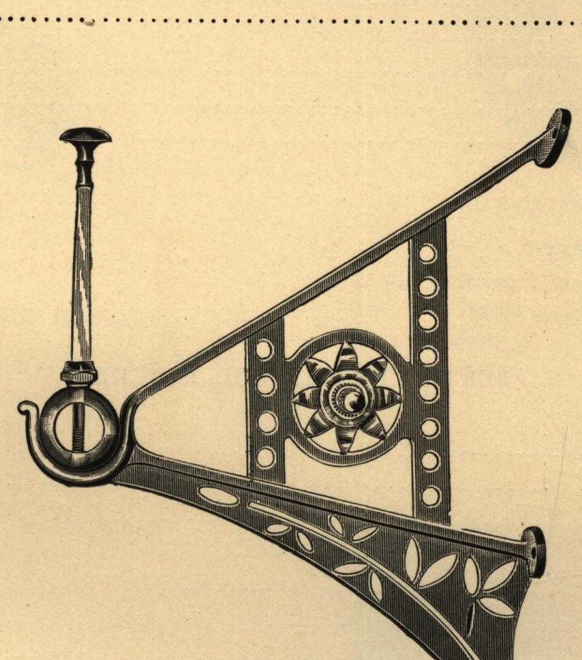


No. 125	Brass	Each,	$6 50
125	Plated	"	8 00
125	Bronze	"	8 00

BERTH CURTAIN ROD BRACKETS.

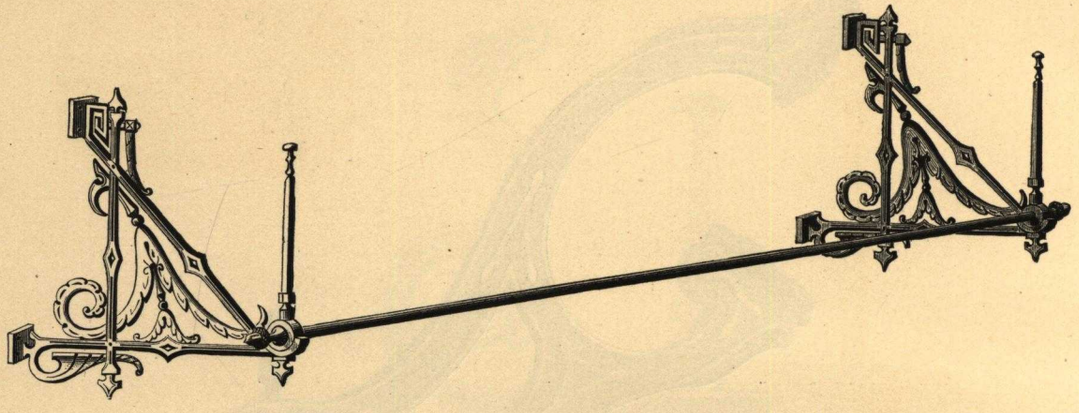


No. 126	Brass	Each,	$6 00
126	Plated	"	7 50
126	Bronze	"	7 50



No. 128	Brass	Each,	$7 50
128	Bronze	"	9 00
128	Plated	"	9 00

BERTH CURTAIN FIXTURES.



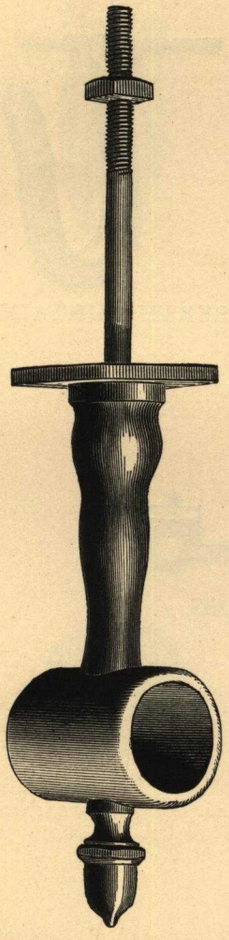
BERTH CURTAIN RODS AND BRACKETS, COMPLETE.

Curtain Rods,	1	inch,	Hand Plated	Per foot, $1 10
"	1¼	"	"	" 1 35
"	1	"	Nickel Plated	" 1 00
"	1¼	"	"	" 1 20
"	1	"	Brass	" 1 00
"	1¼	"	"	" 1 20
"	1	"	Bronze	" 1 10
"	1¼	"	"	" 1 35

BERTH CURTAIN ROD BRACKETS.

No. 101	Plated	Each, $8 00
101	Brass	" 6 50
102	Plated	" 8 50
102	Brass	" 7 00
104	Plated	" 8 00
104	Brass	" 6 50
105	Plated	" 8 00
105	Brass	" 6 50
106	Plated	" 8 50
106	Brass	" 7 00
109	Plated	" 8 75
109	Brass	" 7 50
110	Plated	" 7 00
110	Brass	" 6 00

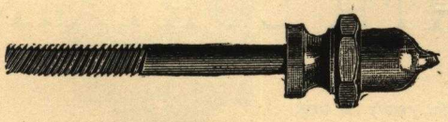
BERTH CURTAIN FIXTURES.



No. 1 CURTAIN ROD HANGER.

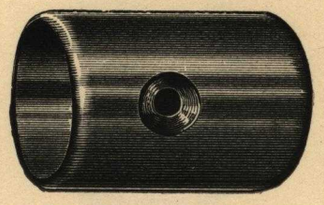
Brass	Each,	$0 75
Plated	"	90

Couplings extra.



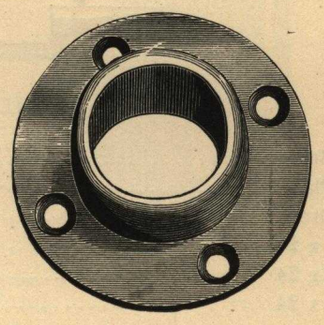
CURTAIN ROD BOLTS.

Brass	Each,	$0 15
Plated	"	20



CURTAIN ROD COUPLING

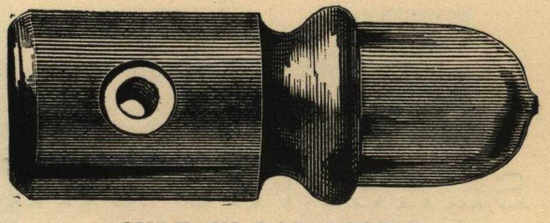
1	inch, Brass	Each,	$0 40
1	" Plated	"	50
1¼	" Brass	"	55
1¼	" Plated	"	70



CURTAIN ROD BUSHING.

(CURTAIN ROD SOCKET.)

1	inch, Brass	Each,	$0 35
1	" Plated	"	45
1¼	" Brass	"	45
1¼	" Plated	"	60

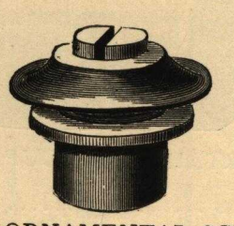


CURTAIN ROD ACORNS.

(CURTAIN ROD TIPS.)

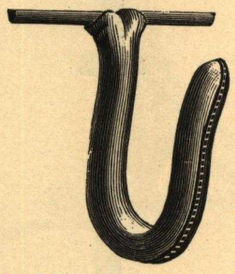
1	inch, Brass	Each,	$0 65
1	" Plated	"	85
1¼	" Brass	"	85
1¼	" Plated	"	1 10

BERTH AND WINDOW CURTAIN FIXTURES.



No. 1 ORNAMENTAL SCREW.

Brass	Each,	$0 15
Plated	"	18
Bronze	"	18



No. 1 BERTH CURTAIN HOOK.

Covered	Each,	$0 14
Brass	"	08

WINDOW CURTAIN ROD AND KNOBS.
(WINDOW CURTAIN STANCHION.)

Knobs, Brass	Each,	$0 20
" Plated	"	25
" Bronze	"	25
Rods, $\frac{5}{16}$ x 24 inches, Plated	"	75
" $\frac{5}{16}$ x 24 " Close Plated	"	1 25
" $\frac{5}{16}$ x 24 " Bronze	"	1 25

CAR · WINDOW · CURTAINS

OF

BEST ENGLISH TERRY AND OTHER IMPORTED GOODS,

FITTED WITH THE "HARTSHORN" OR "McKAY" ROLLER.

ALSO

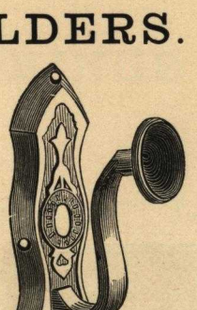
SLEEPING CAR BERTH CURTAINS

Fitted with Hooks, Buttons, Loops, etc., ready for use.

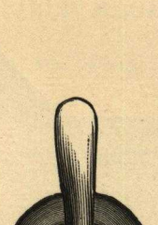
PRICES FURNISHED ON APPLICATION.

WINDOW CURTAIN HOLDERS.

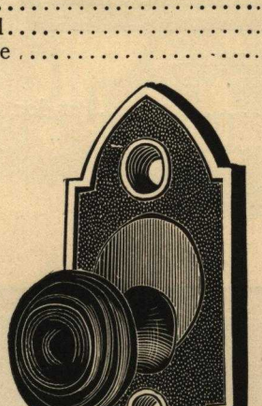
No. 1 Brass.... .....Each, $0 35
1 Plated ..... " 45
1 Bronze. ..... " 45



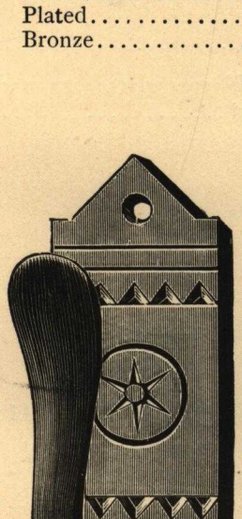
No. 2 Brass.....Each, $0 35
2 Plated..... " 45
2 Bronze ..... " 45



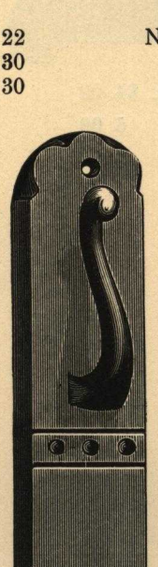
No. 3 Brass .....Each, $0 22
3 Plated..... " 30
3 Bronze..... " 30



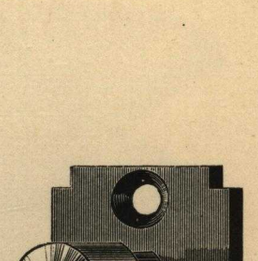
No. 4 Brass.....Each, $0 35
4 Plated..... " 45
4 Bronze..... " 45



No. 5 Brass .....Each, $0 35
5 Bronze..... " 45
5 Plated. ..... " 45



No. 6 Brass.....Each, $0 35
6 Bronze..... " 45
6 Plated..... " 45

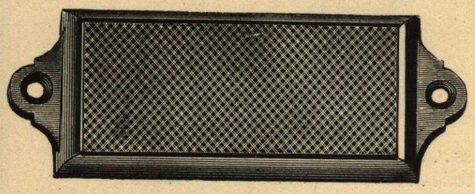


CURTAIN KNOB,
FOR HOLDING CURTAINS.

No. 7 Brass.....Each, $0 25
7 Bronze..... " 30
7 Plated..... " 30

MATCH LIGHTERS AND SAFE.

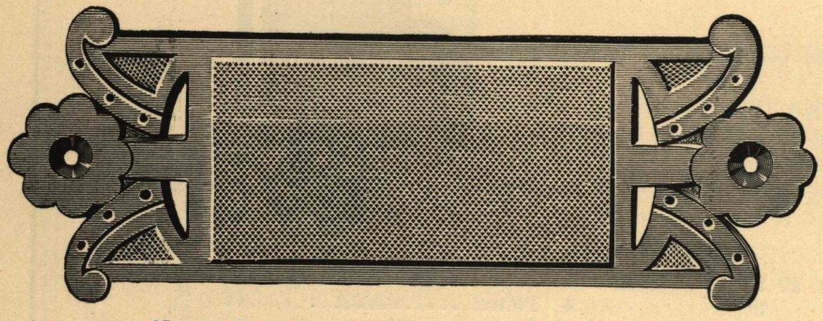
(MATCH STRIKERS.)



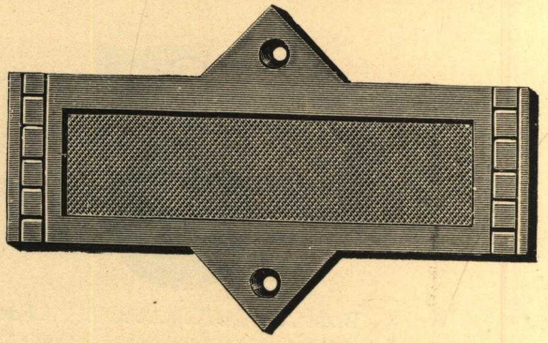
Half Size.

No. 1 Brass.....Per doz. $4 00
1 Plated..... " 5 00

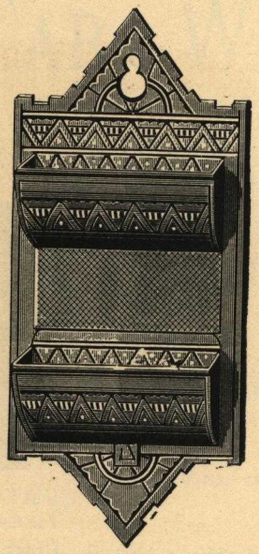
No. 2 Brass.....Per doz. $4 00
2 Plated..... " 5 00



No. 3 Brass.....Per doz. $4 00
3 Bronze..... " 5 00
3 Plated..... " 5 00



No. 4 Brass.....Per doz. $3 00
4 Bronze..... " 4 00
4 Plated..... " 4 00

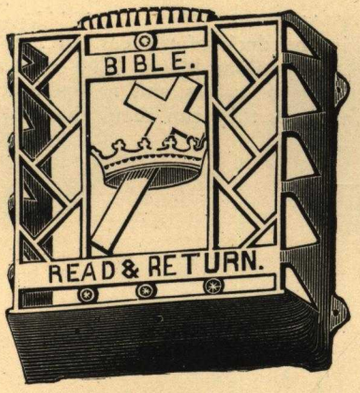


No. 10 MATCH SAFE

No. 10 MATCH SAFE.

Brass.....Each, $2 00
Bronze..... " 2 40
Plated..... " 2 40

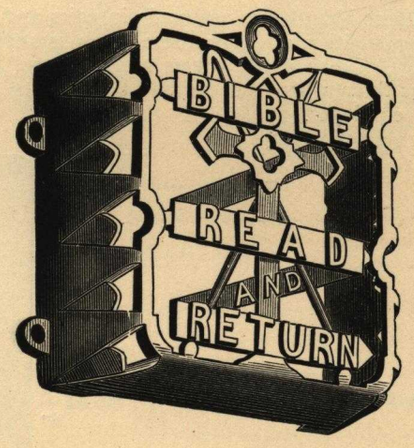
MISCELLANEOUS TRIMMINGS.



BIBLE RACK.

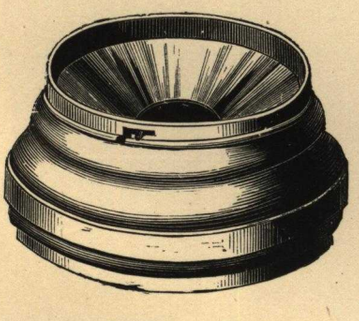
Size, 6 x 6 x 2.

No. 4	Iron, Bronzed	Each,	$0 60
4	Brass	"	1 25
4	Real Bronze	"	1 50
4	Plated	"	1 50



BIBLE RACK.

No. 1	6 x 6 x 2 in., Iron, Bronzed	Per doz.	$6 00
2	6 x 6 x 1½"	"	6 00
3	6 x 6 x 1 "	"	5 00



SPITTOON.

A. & W. Co's Best Nickel Plated		Per doz.	$42 00
Brass		"	30 00

CUSPADORE.

LOADED.

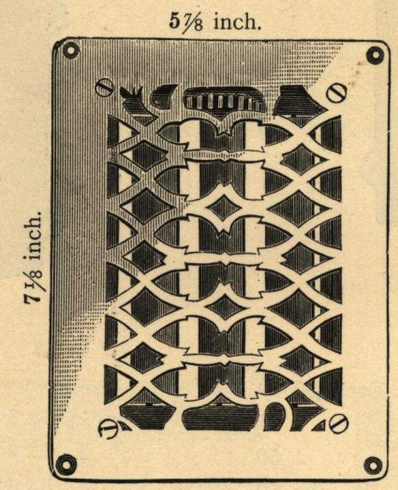
Nickel Plated		Per doz.	$24 00
Brass		"	18 00

MISCELLANEOUS.

VENTILATORS.

Carroll's Patent Ventilator, with large or small doors ..... Each, **$4 50**
" " " " Register ..... " **5 50**

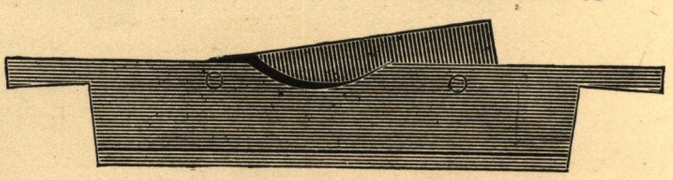
These Ventilators are made in pairs and are arranged alternately in the deck of the car. When the car is moving in either direction there is an INGRESS and EGRESS of air constantly taking place. The car is free from DUST, CINDERS and STORMS at all times. There is no noise nor clattering of valves, and no one is required to change them when the car has reached its destination. Once put in place, they run themselves independent of all employes.



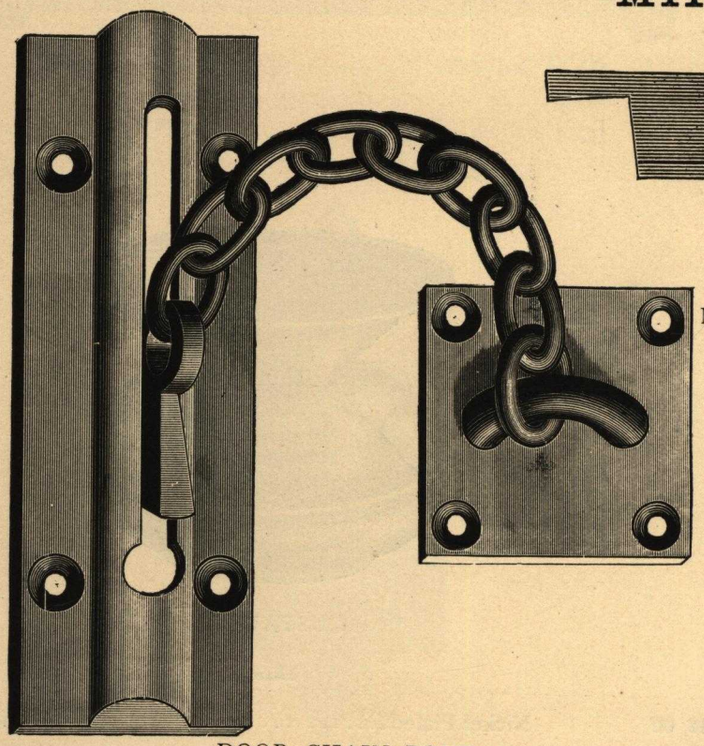
REGISTER.

Iron ..... Each, **$1 75**
Brass ..... " **2 30**

MIRROR FIXTURES.



MIRROR FRAME SPRING.



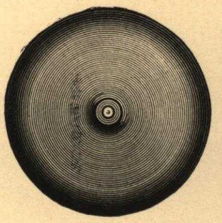
DOOR CHAIN BOLT.

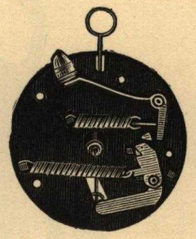
No. 20 Brass ..... Each, **$2 00**

(MIRROR SASH HOLDER.)
(Mirror Sash.)

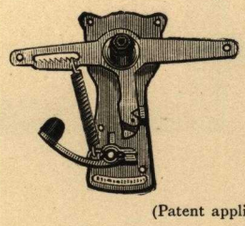
Mirror Frame, Brass ..... Each, **$2 75**
" Plated ..... " **3 00**
" Locks, Brass ..... " **40**
" " Plated ..... " **45**
" Springs ..... " **35**
" Keys ..... " **20**

LOCOMOTIVE FIXTURES.





No. 3 GONG.



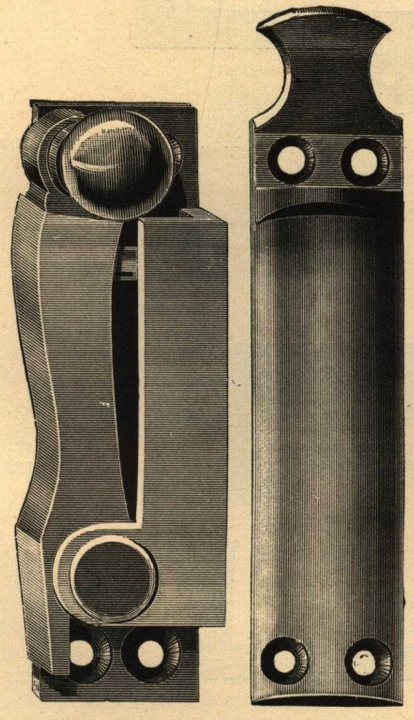
(Patent applied for.)

No. 4 GONG.

(DOUBLE ACTING.)

Diameter .....Inches	4	5	6	7	8	10	12	13
Gong No. 3 .....Price, Each	$2 75	$3 25	$3 90	$5 00	$6 00	$8 00	$14 00	$20 00
Gong No. 4 .....Price, Each	3 15	3 65	4 30	5 75	6 75	9 00	15 00	21 00

NOTE.—No. 4 GONG—A long-felt want by Engineers for a Locomotive Gong which could be operated either way from the engine, has caused the introduction by W. S. Foster of a double-acting Gong.

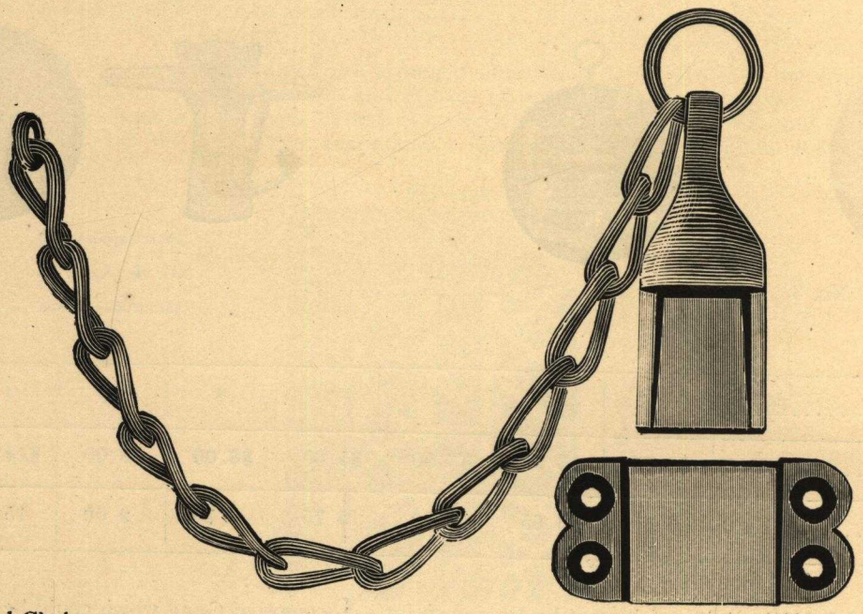


No. 10 LOCOMOTIVE CAB FASTENER.

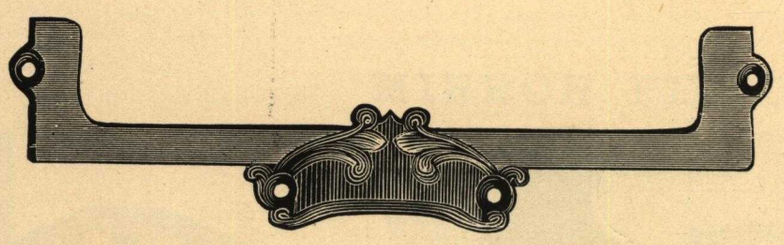
No. 10 LOCOMOTIVE CAB FASTENER.

No. 10 Brass .....Each, $1 00
10 Plated ..... " 1 25

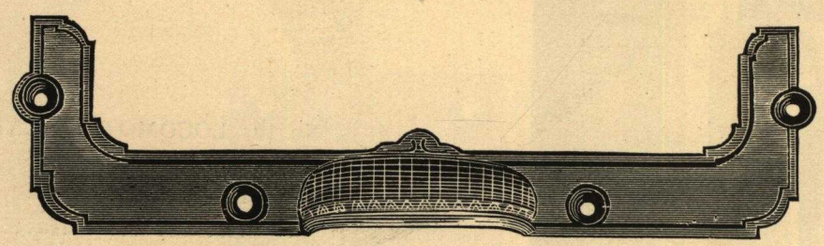
MAIL CAR TRIMMINGS.



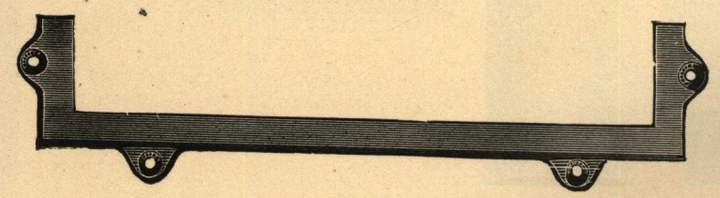
No. 1 Bolt and Chain.....Each, $0 35



No. 4 Holder.....Each, $0 16



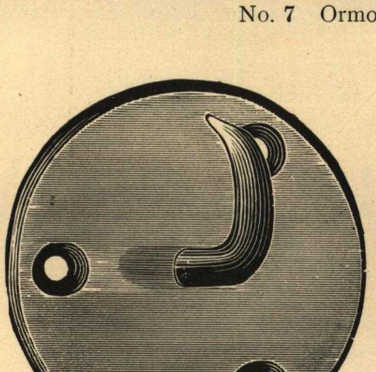
No. 5 Holder.....Each, $0 22



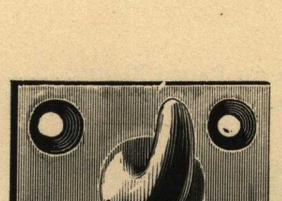
No. 3 Holder.....Each, $0 15

MAIL CAR TRIMMINGS.

No. 7 Ormolu Holder.....Each, $0 16

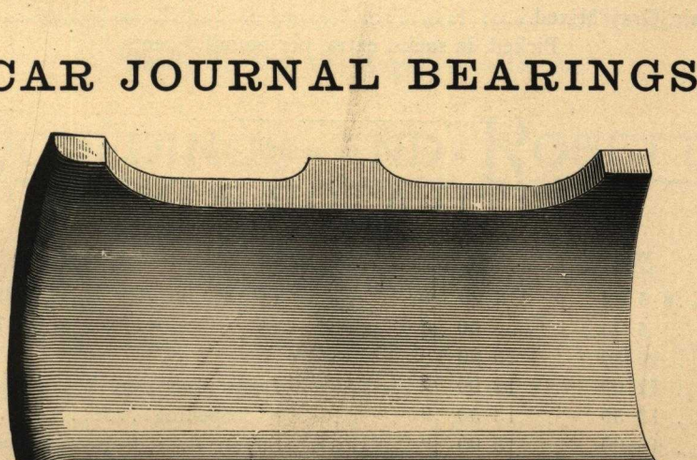


No. 6 Ormolu Hook.....Each, $0 30



No. 2 Ormolu Hook.....Each, $0 15

CAR JOURNAL BEARINGS.

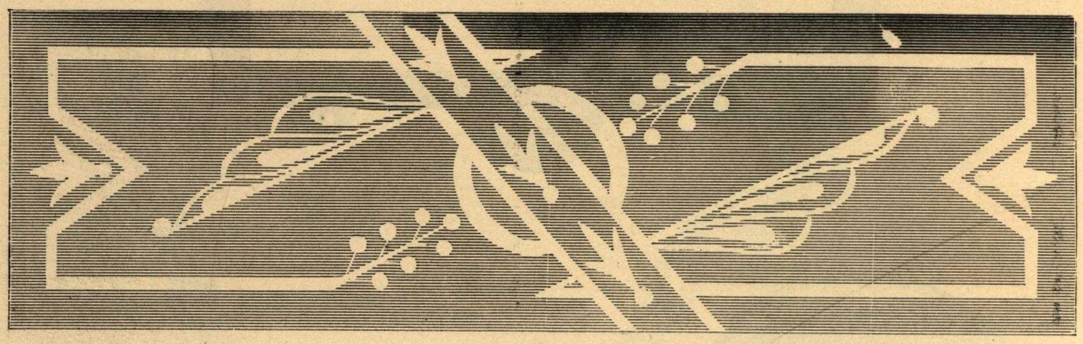


We make a specialty of Car Journal Bearings, and are prepared to furnish these either Solid or under the Hopkins patent, "Lead Lined," (the latter only to those who are or may become members of the Western Railway Association), and believe that, with our improved facilities, we can produce Bearings at lower figures than they can be made for in Companies' shops. Buying our metals in large quantities at close figures, and producing by improved machinery the Bearings in great numbers, we feel confident of assuring our customers the advantage of low prices.

We also make a fine quality of ANTI-FRICTION METAL, which is guaranteed superior to any other metal in use.

Fluctuations in price of metal will not allow us to give fixed quotations for Solid Brass Bearings; but we will, on application, at any time give prices which will defy competition.

MISCELLANEOUS FIXTURES.



ENGRAVED GLASS.

Ruby Glass, for Raised Roofs	Per square foot,	$0 35 to 50
White Glass, ground, for Raised Roofs	" "	15 to 30

Engraving Extra.

HAIR.

Extra Horse Hair, Black Drawings	Per pound,	.....
" " " White "	Market price,	.....
" " " Gray "	" "	.....
No. 1, Extra Horse Hair, Gray Mixed	" "	.....

Picked, in sacks, extra, per pound 3 cents.

VENTILATOR RINGS.

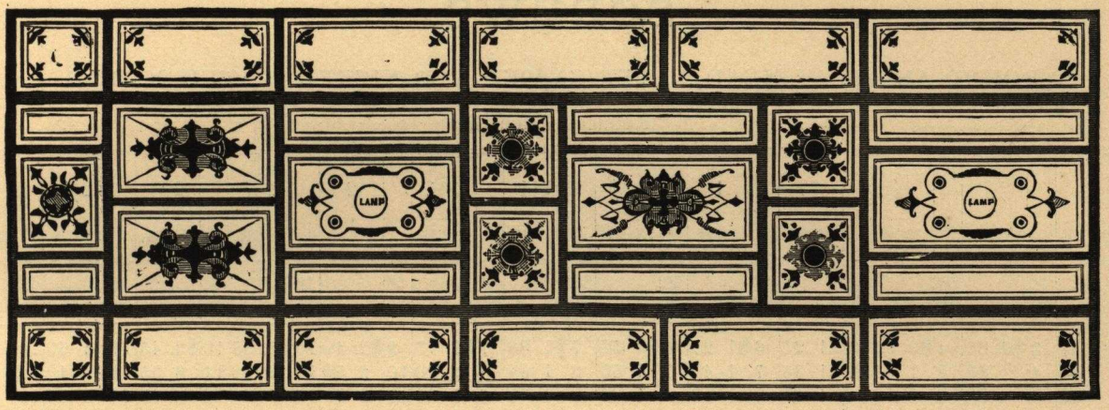
	White Metal.	Real Bronze or Brass.
2½ inch opening	$ 6 00	$ 6 00 Doz.
3 " "	6 00	6 00 "
6 " "	10 50	10 50 "
7 " "	12 00	12 00 "
8 " "	13 50	13 50 "
9 " "	15 00	15 00 "
10 " "	16 00	16 00 "

	White Metal.	Real Bronze or Brass.
11 inch opening	$17 00	$17 00 Doz.
12 " "	18 00	18 00 "

Lamp Canopies, 2½ in. or 3 in. opening	Per dozen,	$12 00
Smoke Bells, Brass or Bronze, for Side Lamps	"	6 00

SUNDRIES.

Foot Rests, Iron	Each,	$0 75
Globe Waste and Pipe Cleaners	Per gross,	9 00
Fire Pokers, Iron	Each,	35
Baggage Check Rings, 9 inch, Brass	"	40
" " " 9 " Iron	"	25
Corner Post Ornaments, Iron	"	40
Door Screens, 18 inch, Cast Iron	"	1 75
" " 39 " " "	"	3 00



WOOD CEILINGS

—FOR—

RAILWAY COACHES

MADE OF THE BEST QUALITY OAK OR BIRCH VENEERS,

Finished either in the Wood or Filled, Rubbed Down and Ready to Decorate, or fully Decorated, Ready to Put Up, together with the

MOULDINGS AND ROSETTES.

BLANK DIAGRAMS

TO BE FILLED UP WITH DIMENSIONS OF PANELS, RADIUS OF CURVE OF ROOF, ETC., AND ALL OTHER INFORMATION FURNISHED UPON APPLICATION.

FRESCOED (CLOTH) HEAD LININGS.

We have many new and elegant designs of the "Queen Anne" and "Eastlake" styles, all of them beautiful, which we offer at prices as follows:

No. 1	Per Lining	$45 00	
2	"	55 00	
3	"	70 00	
Parlor and Sleeping Coach		80 00	and upwards.
Prepared Linings	Per square yard,	62½	
Printed Linings	" " "	80	

Prices quoted are for Linings full decorated, 9 to 10 feet wide, and 45 to 50 feet long.

SCREWS.

ROUND AND FLAT HEAD SILVER CAPPED AND NICKEL PLATED SCREWS.

Reduced Price List.

No.	½ INCH.	No.	⅝ INCH.	No.	¾ INCH.	No.	⅞ INCH.	No.	1 INCH.	No.	1¼ INCH.	No.	1½ INCH.	No.	1¾ INCH.	No.	2 INCH.	No.	2¼ INCH.	No.	2½ INCH.	No.	2¾ INCH.	No.	3 INCH.
3	$0 84	3	$0 88	4	$0 90	6	$1 21	6	$1 27	6	$1 50	7	$1 88	7	$2 15	9	$2 40	10	$2 85	10	$3 45	14	$4 60	14	$5 00
4	84	4	88	5	1 04	7	1 34	7	1 40	7	1 55	8	1 94	8	2 20	10	2 50	11	3 00	11	3 55	16	5 40	16	6 10
5	93	5	98	6	1 16	8	1 47	8	1 53	8	1 65	9	2 05	9	2 30	11	2 70	12	3 25	12	3 65	18	6 55	18	7 55
6	1 07	6	1 13	7	1 30	9	1 61	9	1 68	9	1 80	10	2 15	10	2 40	12	3 00	13	3 75	13	4 00	20	8 15	20	9 15
7	1 20	7	1 25	8	1 44	10	1 69	10	1 75	10	1 95	11	2 38	11	2 55	13	3 45	14	4 00	14	4 25	..	.....	..	.....
8	1 35	8	1 40	9	1 57	11	1 85	11	1 94	11	2 10	12	2 50	12	2 80	14	3 75	15	4 30	15	4 75	..	.....	..	.....
9	1 50	9	1 55	10	1 65	12	2 00	12	2 10	12	2 25	13	2 85	13	3 12	15	4 05	16	4 80	16	5 10	..	.....	..	.....
10	1 60	10	1 63	11	1 82	13	2 35	13	2 45	13	2 60	14	3 15	14	3 45	16	4 40	17	5 20	17	5 55	..	.....	..	.....
..	.....	11	1 80	12	1 95	14	2 50	14	2 70	14	2 80	15	3 50	15	3 80	17	5 00	18	5 70	18	6 10	..	.....	..	.....
..	.....	12	1 90	13	2 30	15	2 75	15	2 95	15	3 24	16	3 90	16	4 10	18	5 40	20	6 75	20	7 30	..	.....	..	.....
..	.....	..	.....	14	2 45	16	3 10	16	3 35	16	3 68	17	4 40	17	4 60	20	6 50	..	.....	..	.....	..	.....	..	.....
..	.....	..	.....	..	.....	..	.....	..	.....	17	4 00	18	4 80	18	5 10	..	.....	..	.....	..	.....	..	.....	..	.....
..	.....	..	.....	..	.....	..	.....	..	.....	18	4 40	20	5 85	20	6 05	..	.....	..	.....	..	.....	..	.....	..	.....

Silver Capped Screws—Discount..... Nickel Plated Screws—Discount.....

BRASS SCREWS.

LIST, DECEMBER 27, 1882.

⅜ INCH.		½ INCH.		⅝ INCH.		¾ INCH.		⅞ INCH.		1 INCH.		1¼ INCH.	
No. 1...	$0 67	No. 2...	$0 67	No. 2...	$0 67	No. 4...	$0 81	No. 6...	$1 18	No. 6...	$1 23	No. 7...	$1 60
2...	67	3...	67	3...	67	5...	88	7...	1 26	7...	1 33	8...	1 77
3...	67	4...	67	4...	67	6...	1 01	8...	1 37	8...	1 47	9...	1 91
4...	67	5...	72	5...	81	7...	1 11	9...	1 47	9...	1 63	10...	2 19
5...	72	6...	79	6...	88	8...	1 18	10...	1 63	10...	1 77	11...	2 41
6...	79	7...	95	7...	1 01	9...	1 33	11...	1 85	11...	1 99	12...	2 66
7...	88	8...	1 01	8...	1 08	10...	1 47	12...	2 06	12...	2 21	13...	2 94
.....		9...	1 11	9...	1 18	11...	1 70	13...	2 33	13...	2 48	14...	3 29
.....		10...	1 23	10...	1 33	12...	1 92	14...	2 65	14...	2 87	15...	3 61
.....		.....		11...	1 47	13...	2 14	15...	3 07	15...	3 24	16...	4 05
.....		.....		12...	1 63	14...	2 41	16...	3 46	16...	3 75	17...	4 57
.....		.....		.....		15...	2 87	.....		18...	4 41	18...	5 08
.....		.....		.....		16...	3 39	.....		.....		20...	6 16

1½ INCH.		1¾ INCH.		2 INCH.		2¼ INCH.		2½ INCH.		3 INCH.	
No. 8...	$2 06	No. 9...	$2 62	No. 10..	$3 29	No. 12..	$4 41	No. 14..	$5 85	No. 16..	$7 87
9...	2 28	10...	2 91	11..	3 68	13..	4 86	15..	6 40	18..	9 55
10...	2 41	11...	3 21	12..	3 98	14..	5 35	16..	7 00	20..	12 10
11...	2 80	12...	3 53	13..	4 38	15..	5 85	17..	7 70	22..	14 70
12...	3 10	13...	3 91	14..	4 83	16..	6 40	18..	8 49	24..	18 20
13...	3 43	14...	4 31	15..	5 29	17..	7 06	20..	10 29	26..	22 40
14...	3 80	15...	4 76	16..	5 81	18..	7 73	22..	11 62	.....	
15...	4 20	16...	5 18	17..	6 44	20..	9 17	24..	13 65	.....	
16...	4 64	17...	5 88	18..	7 06	22..	10 50	.....		.....	
17...	5 20	18...	6 69	20..	8 43	24..	11 20	.....		.....	
18...	5 88	20...	7 70	22..	9 80	.....		.....		.....	
20...	7 00	22...	8 96	.....		.....		.....		.....	
.....		24...	10 50	.....		.....		.....		.....	

Discount.....

SCREWS.

IRON SCREWS.

LIST, DECEMBER 27, 1882.

3/8 INCH.		1/2 INCH.		5/8 INCH.		3/4 INCH.		7/8 INCH.		1 INCH.		1 1/4 INCH.	
No. 1	$0 20	No. 2	$0 20	No. 2	$0 20	No. 4	$0 24	No. 5	$0 31	No. 5	$0 34	No. 7	$0 49
2	20	3	20	3	20	5	28	6	34	6	37	8	56
3	20	4	20	4	21	6	31	7	37	7	41	9	62
4	20	5	23	5	25	7	34	8	42	8	46	10	67
5	20	6	25	6	28	8	37	9	46	9	52	11	74
6	21	7	28	7	31	9	42	10	49	10	56	12	83
7	25	8	31	8	34	10	46	11	58	11	62	13	95
8	28	9	34	9	37	11	52	12	65	12	72	14	1 05
		10	37	10	42	12	59	13	73	13	77	15	1 19
				11	46	13	67	14	83	14	91	16	1 33
				12	52	14	74	15	93	15	1 02	17	1 49
						15	83	16	1 01	16	1 14	18	1 64
						16	98			17	1 21	20	1 96
										18	1 35		
										20	1 67		

1 1/2 INCH.		1 3/4 INCH.		2 INCH.		2 1/4 INCH.		2 1/2 INCH.		2 3/4 INCH.		3 INCH.	
No. 8	$0 65	No. 9	$0 80	No. 10	$0 91	No. 11	$1 05	No. 12	$1 33	No. 13	$1 57	No. 14	$1 95
9	72	10	84	11	98	12	1 21	13	1 44	14	1 79	15	2 10
10	79	11	93	12	1 12	13	1 33	14	1 64	15	2 00	16	2 37
11	87	12	1 04	13	1 25	14	1 51	15	1 85	16	2 16	17	2 65
12	95	13	1 18	14	1 40	15	1 68	16	2 00	17	2 41	18	2 96
13	1 09	14	1 33	15	1 58	16	1 82	17	2 16	18	2 65	20	3 54
14	1 23	15	1 50	16	1 75	17	1 99	18	2 37	20	3 18	22	4 20
15	1 37	16	1 65	17	1 88	18	2 24	20	2 77	22	3 74	24	4 78
16	1 57	17	1 79	18	2 10	20	2 56	22	3 29	24	4 44	26	5 60
17	1 70	18	1 98	20	2 41	22	2 97	24	4 06				
18	1 92	20	2 27	22	2 82	24	3 80						
20	2 17	22	2 66	24	3 50								
		24	3 29										

3 1/2 INCH.		4 INCH.		4 1/2 INCH.		5 INCH.		6 INCH.	
No. 16	$2 87	No. 18	$3 98	No. 18	$4 48	No. 20	$6 30	No. 24	$9 45
17	3 14	20	4 85	20	5 41	22	7 11	26	10 85
18	3 57	22	5 46	22	6 02	24	8 04	28	13 06
20	4 15	24	6 16	24	7 14	26	8 93	30	15 05
22	4 97	26	6 93						
24	5 55								
26	6 39								

Discount.....

ROUND AND FLAT HEAD SILVER PLATED.

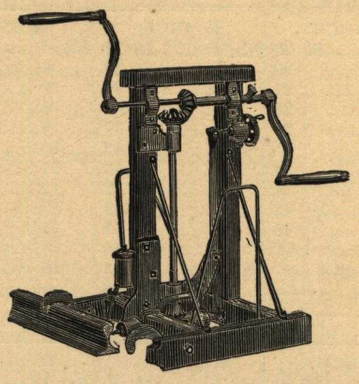
1/2 INCH.		5/8 INCH.		3/4 INCH.		7/8 INCH.		1 INCH.		1 1/4 INCH.	
No. 3	$1 44	No. 3	$1 46	No. 4	$1 56	No. 6	$1 80	No. 6	$1 86	No. 6	$2 12
4	1 48	4	1 50	5	1 64	7	1 94	7	2 05	7	2 22
5	1 54	5	1 58	6	1 74	8	2 10	8	2 28	8	2 40
6	1 64	6	1 68	7	1 85	9	2 29	9	2 50	9	2 81
7	1 77	7	1 82	8	2 00	10	2 52	10	2 78	10	3 26
8	1 92	8	1 96	9	2 18	11	2 81	11	3 12	11	3 60
9	2 09	9	2 13	10	2 41	12	3 15	12	3 57	12	4 20
10	2 31	10	2 34	11	2 65	13	3 65	13	3 92	13	4 69
		11	2 56	12	2 90	14	4 25	14	4 40	14	5 16
		12	2 89	13	3 28	15	4 86	15	4 93	15	5 65
				14	3 74	16	5 50	16	5 64	16	6 17
				15	4 34			17	6 14	17	6 65
				16	5 04			18	6 64	18	7 25
										20	8 50

1 1/2 INCH.		1 3/4 INCH.		2 INCH.		2 1/4 INCH.		2 1/2 INCH.		2 3/4 INCH.	
No. 7	$2 85	No. 7	$0 69	No. 9	$4 57	No. 8	$4 13	No. 10	$5 66	No. 16	$11 20
8	3 04	8	3 82	10	4 80	9	4 50	12	6 88	18	13 84
9	3 37	9	3 94	11	5 24	11	5 62	13	7 69	20	17 22
10	3 72	10	4 30	12	5 72	12	6 05	14	8 61	22	20 69
11	4 14	11	4 69	13	6 64	13	6 89	15	9 45	24	25 02
12	4 60	12	5 18	14	7 56	14	7 78	16	10 18		
13	5 16	13	5 82	15	8 49	15	8 65	17	11 54	3 INCH.	
14	5 80	14	6 61	16	9 40	16	9 45	18	12 66	No. 14	$10 00
15	6 60	15	7 54	17	10 34	17	10 33	20	15 44	16	12 36
16	7 42	16	8 60	18	11 25	18	11 44	22	18 25	18	15 00
17	8 37	17	9 77	20	13 24	20	12 76	24	21 45	20	19 00
18	9 53	18	11 10	22	16 58	22	16 49			22	23 00
20	12 32	20	12 81			24	19 53			24	28 60
		22	15 12							26	35 20

Other Sizes made to order.

Discount.....

TRACK RAIL DRILL AND WIRE CLOTH.



HITCHCOCK'S TRACK RAIL DRILL.

This desirable and novel device for drilling holes for Fish Plate Bolts in the rails without removing them from the track, is now in the hands of a number of railroad track men throughout the country, serving the purpose for which the inventor designed it with remarkable success. It can be operated by one or two men, and will drill a hole in steel or iron rails in from three to six minutes, at the proper and exact distance from the end, top and bottom of the rail, without measuring, counter-sinking or scribing.

Price..... **$55 00**

PHOSPHOR-BRONZE WIRE CLOTH.

Our observation has taught us that brass wire netting of fine wire and small mesh used as a dust guard in the construction of railway coaches, soon becomes brittle, or, as it were, rotten. More especially does this occur when the netting is exposed to the action of the elements, or becomes frequently wet in washing cars. No doubt but that much of the trouble is caused by the admixture of zinc in the manufacture of the wire. To overcome this, we have lately caused a quantity to be made from Phosphor-Bronze Wire. After severe tests have found it to fully meet the requirements of the case, and we confidently recommend it to car builders at prices following:

REGULAR GRADE.

2 Mesh,	No. 16	Wire.	.....	Per square foot,	$0	55
3 "	17	"	.....	" "		55
4 "	18	"	.....	" "		55
5 "	19	"	.....	" "		55
6 "	20	"	.....	" "		55
8 "	22	"	.....	" "		55
10 "	23	"	.....	" "		55
12 "	24	"	.....	" "		55
14 "	25	"	.....	" "		55
16 "	26	"	.....	" "		55
18 "	27	"	.....	" "		55
20 "	28	"	.....	" "		55
22 "	29	"	.....	" "		55
24 "	30	"	.....	" "		55
30 "	31	"	.....	" "		57
40 "	33	"	.....	" "		60

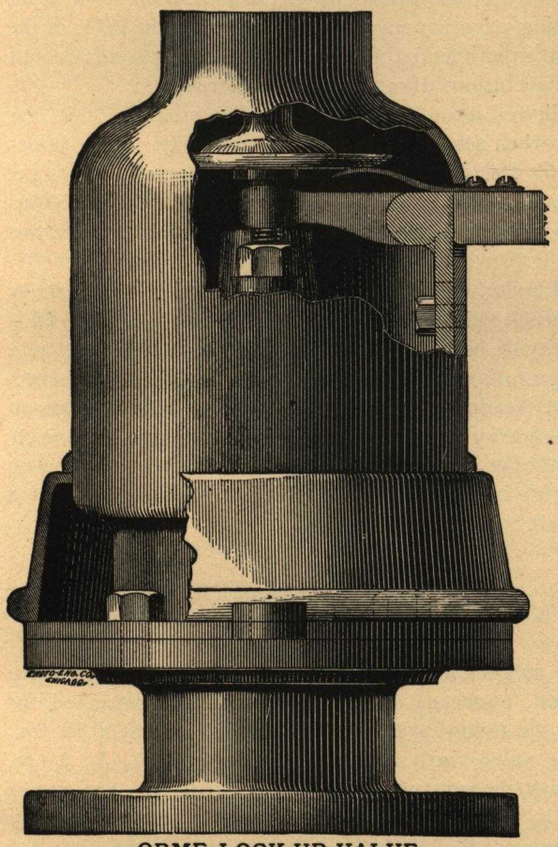
TWILLED WIRE CLOTH.

All Meshes 10 cents per square foot advance on price of plain cloth.

NOTE.—Special and irregular sizes made to order at slightly advanced cost.

SAFETY VALVES.

CELEBRATED ORME SAFETY VALVE.



ORME LOCK-UP VALVE.
Patented March 16, 1875, and November 14, 1876.

ORME PATENT

Seat, Spring-Loaded and Lock-Up

POP SAFETY VALVE

—FOR—

LOCOMOTIVE, MARINE AND STATIONARY

BOILERS

GOVERNMENT VALVE.

Adopted by the Board of Supervising Inspectors of Steam Vessels, at their meeting held in Washington, D. C., January, 1877.

TO USERS OF SAFETY VALVES.

The inefficiency of the ordinary Lever Valve is now fully recognized by engineers and boiler makers, and so in order to secure the circumferential escape of steam they are compelled to adopt a large and expensive size of this Valve, which only mitigates but does not remove the evil.

We claim that the ORME SAFETY AND RELIEF VALVES are, in comparison of size and effectiveness, as 1 to 6; that is to say, that a 1½ inch "Orme" is more effective than an 8 inch Lever Valve, and while the list price of the Orme is only $30.00 the latter costs $154.00.

☞ The use of the Orme Valve is an absolute Preventive of Boiler Explosions.

SAFETY VALVES.

BOILER EXPLOSIONS.

Many theories have been advanced to explain the cause of boiler explosions, but in the light of later experience, they are generally ascribed to the following causes: Inefficient safety valves, deterioration from wear, or mismanagement. It was shown by a series of boiler-bursting experiments, made at New York, in 1871, in the presence of many of the leading engineers. Nine boilers were experimented upon. The following is an account of one of the boilers, the experiments made upon it, and the conclusions drawn from the experiments:

The boiler was an old one. The inspector's certificate allowed it to be worked at 30 lbs. pressure. It was subjected to a hydrostatic pressure of 60 lbs. per square inch, when several of the braces gave way. The boiler was repaired and again subjected to hydrostatic pressure of 59 lbs., as also to a steam pressure of 45 lbs. per square inch, which pressure is borne without fracture. It was again subjected to steam pressure, with the following results: At 50 lbs. several of the braces gave way with a loud report, and when the pressure of 53½ lbs. was reached, the boiler burst with terrific force.

The following are some of the conclusions: 1st—An old boiler, containing a large quantity of water above the highest point of its heating surface, can be exploded with such violence as to reduce it to mere *debris*. 2d—That with only a wood fire, generating a much smaller quantity of heat in equal time to a coal fire, there were required only thirteen minutes to raise the steam from the inspector's working allowance to the exploding pressure.

Mr. Trowbridge, in a paper read before the Connecticut Academy of Sciences, on Safety Valves, gave an account of a series of experiments made by M. Burg, of the Academy of Sciences of Vienna, showing conclusively that the ordinary safety valve presents no real security againt boiler explosions. If the fires are kept up, and no other relief afforded but the self-action of the valve, the pressure in the boiler must continue to rise, and that a few moments' inattention on the part of the engineer may result in an explosion.

DEFECTS OF THE ORDINARY SAFETY VALVE.

M. Burg, of Vienna, has carefully investigated the whole subject, and found that the ordinary safety valve cannot rise to an appreciable distance from its seat. He found, by means of special apparatus constructed for the purpose, that an ordinary 4 inch valve rises according to the following laws: That for pressures of 12 lbs., 20 lbs., 35 lbs., 50 lbs., 60 lbs., 70 lbs., 80 lbs. and 90 lbs., the valve rises in parts of an inch $\frac{1}{36}$, $\frac{1}{48}$, $\frac{1}{54}$, $\frac{1}{65}$, $\frac{1}{86}$, $\frac{1}{108}$, $\frac{1}{132}$, and $\frac{1}{168}$, respectively; or, taking the average of valves, the pressure from 10 lbs. to 40 lbs., the rise is $\frac{1}{40}$ inch; from 40 to 70 lbs., $\frac{1}{80}$, and from 70 lbs. to 90 lbs., $\frac{1}{120}$ of an inch. Another series of experiments by M. Burg is still more conclusive, and justifies him in the statement that the most incomprehensible delusion has existed in regard to the efficiency of the common safety valve, and that it cannot be depended upon as a security against explosions.

Prof. Zeuner also states that all the steam at a pressure of five atmospheres that a tubular boiler of 500 square feet of heating surface is likely to produce, can be discharged through an orifice of .59 of a square inch area, which would equal a hole ⅞ inch diameter. This statement has been confirmed by a series of experiments conducted some years ago by the Novelty Iron Works, N. Y., the evaporation being at the rate of 2.5 lbs. of water per minute per square foot of heating surface. Now, a valve blowing off steam at about 75 lbs. per square inch, will not rise over $\frac{1}{120}$ part of an inch from its seat; therefore the diameter of a safety valve to relieve this size of boiler, would require to have a diameter of 26.5 inches.

THE ORME VALVE IS AN ABSOLUTE SAFETY VALVE.

Opens promptly at the fixed working presure, and will allow no excess of pressure above that limit, and closes promptly with the least possible loss of pressure. The 1½ inch valve being more efficient and reliable than one 6 inch or two 3 inch lever valves, the great importance of a perfectly reliable, efficient, and economical safety valve, which will open promptly at the fixed working pressure, and allow no excess of pressure above that limit, and close promptly with the least possible loss of steam, cannot be over estimated by the users of steam boilers.

SAFETY VALVES.

Some of the New and Most Important Features in this Valve are as follows:

THE ADJUSTABLE ANGULAR FACE,

By which the Valve can be adjusted to lose any desired pounds pressure of steam; also, that there is a constant pressure of steam on the Valve Seats, while blowing off, thereby preventing all abrasion and wear of Seats, and consequent leakage.

THE DEVICE BY WHICH INEQUALITY OF PRESSURE OF THE SPRING IS OVERCOME,

And also in transmitting the same to the Axis of the Valve, thereby overcoming all friction and liability of Valve to cock or tilt, consequently preventing leakage and cutting of seats thereby.

THE CONSTRUCTION OF THE LOCK-UP CASE,

Which is simple and effective, and when in place and locked up, precludes all possibility of the Valve being tampered with, thereby making a perfect Lock-Up Safety Valve.

ALL SEATS MADE OF PHOSPHOR-BRONZE METAL.

SPECIAL ADVANTAGES CLAIMED OVER ALL OTHER VALVES.

Simplicity of construction, ease of connection and adjustment.
The most reliable and sensitive in use.
The adjustable angular face, by which all wear of the Seats is prevented.
Entirely frictionless. Cannot cock or tilt, and will never stick to Seat.
Will not deteriorate under continued use.
Opens precisely at the fixed working pressure, and will allow no excess of pressure above that limit.
Reduces the pressure rapidly, and will close with smallest possible loss of pressure.
The limits of pressure within which the Valve will open and close are adjustable.
These Valves being made under the direct supervision of the Patentee, and tested by him, ordinary defects of mechanism are guarded against.

INSTRUCTIONS FOR ADJUSTING VALVE.

The Valve being in place, compress Spring four-eighths of an inch, which will give about **120** pounds pressure, and secure yoke by lower nuts; then screw adjustable ring up against valve; then screw back or down one-third of a turn nearly. If the Valve loses too much pressure, the ring requires to be screwed a little further down, and if the Valve don't blow prompt, screw ring up, or a little nearer Valve. When adjusted secure by clamp ring.

By a little care, the Valve can be adjusted so that the limit of pressure within which the valve will open and close will not exceed one-half pound pressure.

All Valves shown with Flanges are flanged above two inches, and are of the following sizes:

Valve.	Diam. of Flange.
2½	8
3	9
3½	9¾
4	10½
5	12½
6	13½

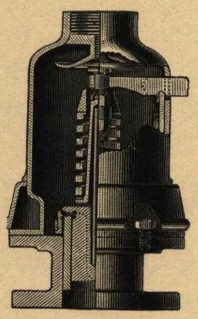
SAFETY VALVES.

No. 1.

ORME LOCK-UP VALVE,

WITH TOP OUTLET,

And provided with a Lever for easing the Valve.



PRICE LIST.

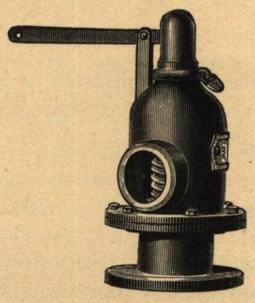
1½	$30 00
2	40 00
2½	50 00
3	60 00
3½	70 00
4	80 00
5	100 00
6	120 00

No. 2.

ORME LOCK-UP VALVE,

WITH SIDE OUTLET,

With Lever for easing the Valve, or by which *all* the steam can be blown off the boiler if desired.



PRICE LIST.

1½	$30 00
2	40 00
2½	50 00
3	60 00
3½	70 00
4	80 00
5	100 00
6	120 00

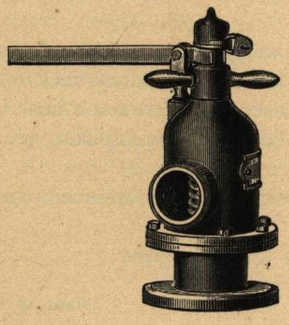
No. 3.

ORME LOCK-UP MARINE VALVE,

FOR STEAMSHIPS,

With Side Outlet, with Lever for easing the Valve, or by which *all* the steam may be blown off the boiler if so desired.

This Valve is also provided with handles, by which it can be turned on its seat to remove any scale that may be formed on them, and this can be done without in any way interfering with the Lock-up. All the working parts are made of the best quality of Steam Metal—Springs all Nickel-plated.



PRICE LIST—SPRINGS ALL NICKEL-PLATED.

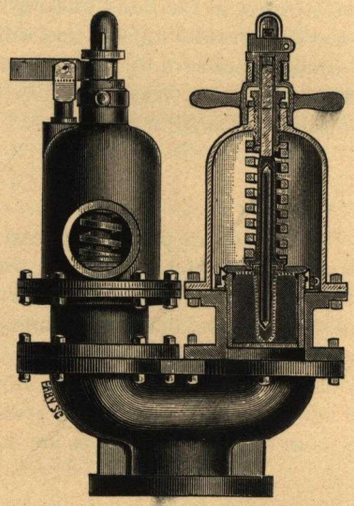
3	$75 00
3½	90 00
4	110 00
5	140 00
6	170 00

No. 4.

ORME TWIN MARINE LOCK-UP VALVES,

FOR STEAMSHIPS.

These Valves have Side Outlet, Lever for easing or blowing off *all* the steam if necessary, and are so arranged that they can be turned on their seats without interfering with the Lock-up. Springs are all Nickel-plated.



PRICE LIST OF VALVES,

Per Pair, without the Base.

3	$150 00
3½	180 00
4	220 00
5	280 00
6	340 00

In ordering, please state the Pressure at which you desire the Valve to be set, size of Boiler, and Grate surface.

SAFETY VALVES.

No. 5.

ORME PLAIN VALVE,

LOCOMOTIVE STYLE—ALL BRASS.

PRICE LIST.

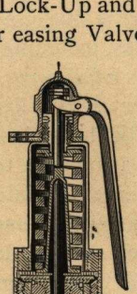
¾ inch	$10 00
1 "	12 50
1¼ "	16 00
1½ "	22 00
2 "	30 00
2¼ "	35 00
2½ "	40 00
3 "	50 00

No. 6.

ORME PLAIN VALVE,

LOCOMOTIVE STYLE—ALL BRASS,

And provided with Lock-Up and Lever Attachment for easing Valve.



PRICE LIST.

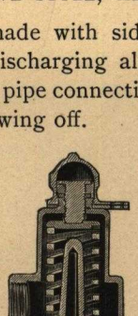
¾ inch	$12 00
1 "	14 00
1¼ "	18 00
1½ "	25 00
2 "	33 00
2¼ "	38 00
2½ "	43 00
3 "	54 00

No. 10.

ORME PLAIN VALVE,

LOCOMOTIVE STYLE, ALL BRASS.

This Valve is made with side outlet, designed with the view of discharging all waste steam into the smoke stack by pipe connections, thereby avoiding noise while blowing off.



PRICE LIST.

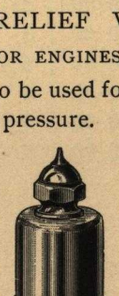
2¼ inch	$38 00
2½ "	43 00
3 "	54 00

No. 7.

ORME RELIEF VALVE,

ALL BRASS—FOR ENGINES AND PUMPS.

This Valve can also be used for Hydraulic Pumps to carry any desired pressure.



PRICE LIST.

¾ inch	$10 00
1 "	12 00
1¼ "	16 00
1½ "	22 00
2 "	30 00
2½ "	40 00
3 "	50 00

In ordering, please state the Pressure at which you desire the Valve to be set, size of Boiler, and Grate surface.

SAFETY VALVES.

No. 8.

ORME BLEEDER AND RELIEF VALVE.

This Valve possesses all the features of the No. 7 Relief Valve, and is likewise adapted for Pumps used in Water Works, including this special feature, that there are *two adjustments*, one set, say, at 40 lbs., and the other at 200 lbs., or any maximum pressure that may be determined upon. The valve can be changed in a moment to blow off at either of these pressures, or at any intermediate pressures. In mills requiring a lower pressure of steam during the night than that carried during the day, this Valve has important advantages, it being instantly adjustable by turning the hand wheel at the top.

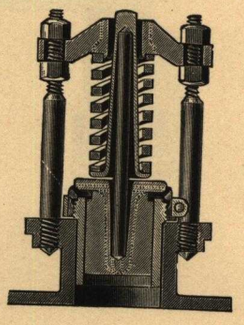
PRICE LIST.

WITH TWO ADJUSTMENTS.		WITH ONE ADJUSTMENT.	
2 inch	$50 00	2 inch	$40 00
2½ "	60 00	2½ "	50 00
3 "	70 00	3 "	60 00
3½ "	80 00	3½ "	70 00
4 "	100 00	4 "	80 00
5 "	120 00	5 "	100 00
6 "	140 00	6 "	120 00

No. 9.

ORME OPEN VALVE,

WITH OR WITHOUT CASE.



PRICE LIST.

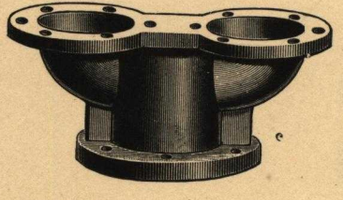
WITHOUT CASE.

1½ inch	$24 00
2 "	32 00
2½ "	40 00
3 "	48 00
3½ "	56 00
4 "	64 00
5 "	80 00
6 "	96 00

WITH CASE, WITHOUT LEVER AND LOCK-UP.

1½ inch	$27 00
2 "	36 00
2½ "	45 00
3 "	54 00
3½ "	64 00
4 "	74 00
5 "	93 00
6 "	112 00

PRICE LIST OF BASES—NET.



TWIN BASES.

For 3 inch Valve	$15 00
" 3½ " "	20 00
" 4 " "	25 00
" 5 " "	35 00
" 6 " "	40 00

TRIPLE BASES.

For 3 inch Valve	$23 00
" 3½ " "	30 00
" 4 " "	38 00
" 5 " "	53 00
" 6 " "	67 00

QUADRUPLE BASES.

For 3 inch Valve	$30 00
" 3½ " "	40 00
" 4 " "	50 00
" 5 " "	70 00
" 6 " "	90 00

WRITE FOR DISCOUNT.

The foregoing prices are subject to discount, which will be made upon application.

In ordering, please state the Pressure at which you desire the Valve to be set, size of Boiler, and Grate surface.

CAR HEATING

With every desire to keep in advance of our Competitors, we some time since added to our already large line of Manufacture, that of

HOT WATER HEATERS

FOR THE HEATING OF

Sleeping, Dining, Parlor, Drawing Room and Day Coaches,

AND

POSTAL, BAGGAGE and EXPRESS CARS,

And so appreciated were our efforts in this departure by the Railway Public, that our HEATERS are now in successful operation on nearly all the leading roads in the United States and Canada, and the capacity of our works have been strained to the utmost to supply the demand.

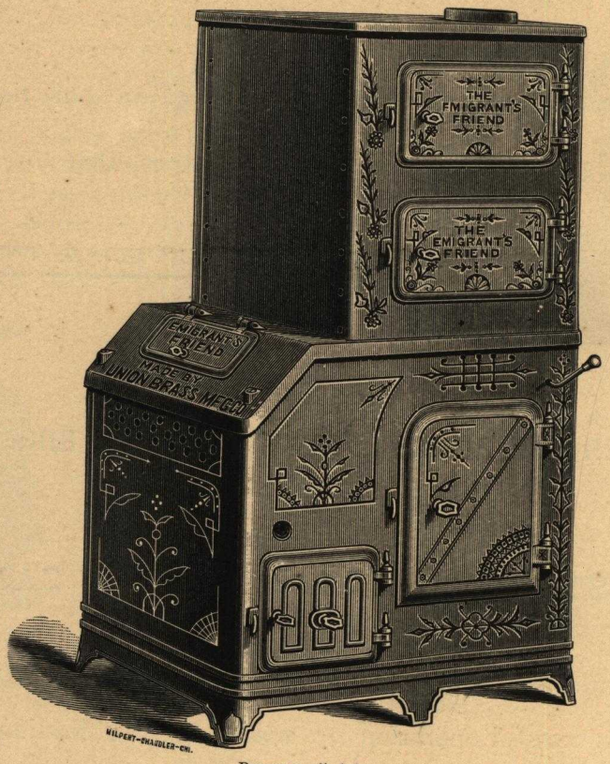
Our HEATERS are now so favorably known and widely adopted that we have thought it unnecessary to illustrate them in this issue of our Catalogue.

We also make a full line of Car Stoves, either for heating the Car by hot air or by direct radiation; also the Kohler Stove, illustrated on page 209, and all adapted to burn either hard or soft coal.

We also manufacture the "EMIGRANT'S FRIEND," a combined Cooking and Heating Stove, designed for use on all Trans-Continental Lines (such as the Northern Pacific, etc.), carrying large numbers of Emigrants, and it is rapidly becoming very popular. It is shown on page 208. All of these goods are neatly and substantially made from the best materials, are highly successful in their operations, and all orders for same will receive our usual prompt and careful attention for execution and shipment.

THE EMIGRANT'S FRIEND

We present this combined Heating and Cooking Stove to your notice, knowing that it will fill a long felt want. The Heating qualities are ample and all that could be desired. It is especially adapted for Emigrant Cars.



Patent applied for.

No. 1. EMIGRANT HEATING AND COOKING STOVE.

This stove has three cooking ovens, affording ample space for many passengers to use at the same time.

Patent applied for.

No. 2. EMIGRANT HEATING AND COOKING STOVE.

This stove has one cooking oven, and is designed to use on short runs and where saving of room is desirable.

PRICES FURNISHED ON APPLICATION.

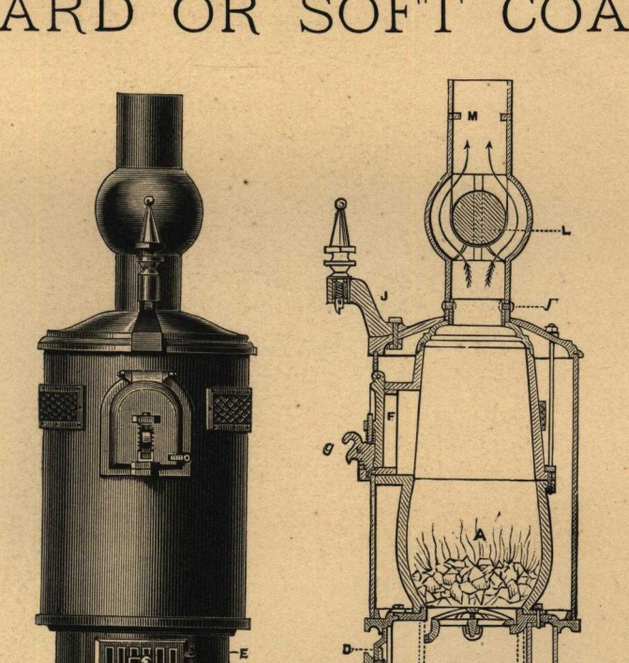
THE

KOHLER STOVE

ADAPTED TO BURN EITHER

HARD OR SOFT COAL.

HEAT PRODUCED WITH PERFECT SAFETY



COMBINED WITH ECONOMY OF FUEL

REFERENCE.

L A cast iron ball, placed in the smoke flue or cast iron pipe collar, which when the car leaves a level, coming in contact with lugs **M**, is prevented from passing them, thus closing the aperture and preventing the egress of coal or fire in this direction. The ribs **"1"** prevent the ball from dropping into fire chamber **A**, although the smoke and draft is not in any way interfered with, but is allowed abundant space between the ribs.

J A Spring Catch holding the door open when filling fire pot.

F Door by which the fire is fed.

G Spring Catch on face of door, automatically locking same when dropped from spring catch **J**.

A Fire Chamber.

B Ash Chamber having **D** for door, which is secured by spring catch **E**, as shown in full view cut.

PRICES FURNISHED ON APPLICATION.